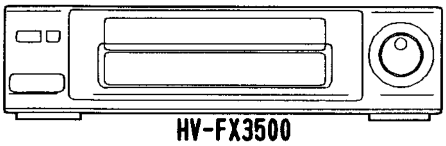
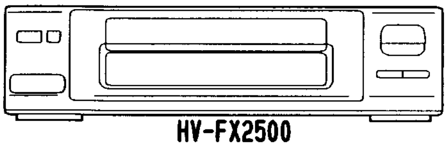
aiwa

aiwa
SERVICE

HV-FX3500
HV-FX2500



HV-FX3500



HV-FX2500

STEREO VIDEO
CASSETTE RECORDER

- BASIC VIDEO MECHANISM: TN-6500P4LRH111S
- TYPE: Z(HV-FX3500/FX2500)
ED(FX3500). EH(FX2500)

SERVICE MANUAL

S/M Code No. 09-96A-161-40I

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SPECIFICATIONS

< HV-FX3500Z >

Video Recording system	Rotary 2 head helical scanning system
Video head	Double azimuth 4 head
Video signal	PAL colour signal, 625 lines, 50 fields
Recording/playback time	4 hours 20 minutes max. with E-260 tape, SP 8 hours 40 minutes max. with E-260 tape, LP
Fast forward/rewind time	Approx. 3 min. with E-180 tape
Tape speed	SP: 23.39 mm/sec. LP: 11.69 mm/sec.
Usable cassettes	VHS-PAL video cassettes
Channel coverage	VL (VHF–Low) : E2–4, S1–S10 VH (VHF–High) : E5–12, S11–S41 U (UHF) : 21–69
RF output	UHF channel between 30 and 39
RF output level	73 dBμ, 75 ohms
Video input level	0.5 – 2.0 Vp-p, 75 ohms, unbalanced
Video output level	1.0 Vp-p, 75 ohms, unbalanced
Horizontal resolution	240 lines (nominal)
Video S/N	43 dB (nominal)
Audio track	3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track)

Hi-Fi Frequency response	20 Hz — 20 KHz
Hi-Fi Dynamic range	More than 90 dB
Hi-Fi Wow and Flutter	Less than 0.01% Wrms (nominal)
Audio input level	SCART: – 8 dB, 22 Kohms RCA: – 8 dB, 22 Kohms
Audio output level	SCART: – 8 dB, less than 2.2 Kohms RCA: – 8 dB, less than 2.2 Kohms
Operating temperature	5 °C — 40 °C
Power requirements	230 V AC, 50 Hz
Power consumption	33 watts
Dimensions	380 (W) × 293 (D) × 99 (H) mm (15 × 11⁵/₈ × 4 in.)
Weight	Approx. 5 kg (11 lbs.)

- Design and specifications are subject to change without notice.

< HV-FX3500ED >

Video Recording system	Rotary 2 head helical scanning system
Video head	Double azimuth 4 head
Video signal	PAL color signal, 625 lines, 50 fields
Recording/playback time	4 hours 20 minutes max. with E-260 tape, SP 8 hours 40 minutes max. with E-260 tape, LP
Fast forward/rewind time	Approx. 3 min. with E-180 tape
Tape speed	SP: 23.39 mm/sec. LP: 11.69 mm/sec.
Usable cassettes	VHS-PAL video cassettes
Channel coverage	VL (VHF–Low) : E2–4, S1–S10 VH (VHF–High) : E5–12, S11–S41 U (UHF) : 21–69
RF output	UHF channel between 30 and 39
RF output level	73 dBμ, 75 ohms
Video input level	0.5 – 2.0 Vp-p, 75 ohms, unbalanced
Video output level	1.0 Vp-p, 75 ohms, unbalanced
Horizontal resolution	240 lines (nominal)
Video S/N	43 dB (nominal)
Audio track	3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track)

Hi-Fi Frequency response	20 Hz — 20 KHz
Hi-Fi Dynamic range	More than 90 dB
Hi-Fi Wow and Flutter	Less than 0.01% Wrms (nominal)
Audio input level	SCART: – 8 dB, 22 Kohms RCA: – 8 dB, 22 Kohms
Audio output level	SCART: – 8 dB, less than 2.2 Kohms RCA: – 8 dB, less than 2.2 Kohms
Operating temperature	5 °C — 40 °C
Power requirements	230 V AC, 50 Hz
Power consumption	33 watts
Dimensions	380 (W) × 293 (D) × 99 (H) mm (15 × 11⁵/₈ × 4 in.)
Weight	Approx. 5 kg (11 lbs.)

- Design and specifications are subject to change without notice.

< HV-FX2500Z >

Video recording system	Rotary 2 head helical scanning system
Video head	Double azimuth 4 heads
Video signal	PAL color signal, 625 lines, 50 fields
Recording/playback time	4 hours 20 minutes max. with E-260 tape, SP 8 hours 40 minutes max. with E-260 tape, LP
Fast forward/rewind time	Approx. 3 min. with E-180 tape
Tape speed	SP: 23.39 mm/sec. LP: 11.69 mm/sec.
Usable cassettes	VHS-PAL video cassettes
Channel coverage	VL (VHF–Low) : E2–4, S1–S10 VH (VHF–High) : E5–12, S11–S41 U (UHF) : 21–69
RF output	UHF channel between 30 and 39
RF output level	73 dBμ, 75 ohms
Video input level	0.5 – 2.0 Vp-p, 75 ohms, unbalanced
Video output level	1.0 Vp-p, 75 ohms, unbalanced
Horizontal resolution	240 lines (nominal)
Video S/N	43 dB (nominal)

Audio track	3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track)
Hi-Fi Frequency response	20 Hz — 20 KHz
Hi-Fi Dynamic range	More than 90 dB
Hi-Fi Wow and Flutter	Less than 0.01% (nominal)
Audio input level	SCART: – 8 dB, 22 Kohms RCA: – 8 dB, 22 Kohms
Audio output level	SCART: – 8 dB, less than 2.2 Kohms RCA: – 8 dB, less than 2.2 Kohms
Operating temperature	5 °C — 40 °C
Power requirements	230 V AC, 50 Hz
Power consumption	33 watts
Dimensions	380 (W) × 293 (D) × 99 (H) mm (15 × $11^5/_8$ × 4 in.)
Weight	Approx. 4.9 kg (10.78 lbs.)

- Design and specifications are subject to change without notice.

< HV-FX2500EH >

Video recording system	Rotary 2 head helical scanning system
Video head	Double azimuth 4 heads
Video signal	PAL color signal, 625 lines, 50 fields
Recording/playback time	4 hours 20 minutes max. with E-260 tape, SP 8 hours 40 minutes max. with E-260 tape, LP
Fast forward/rewind time	Approx. 3 min. with E-180 tape
Tape speed	SP: 23.39 mm/sec. LP: 11.69 mm/sec.
Usable cassettes	VHS-PAL video cassettes
Channel coverage	VL (VHF–Low) : E2–4, S1–S10 VH (VHF–High) : E5–12, S11–S41 U (UHF) : 21–69
RF output	UHF channel between 30 and 39
RF output level	73 dBμ, 75 ohms
Video input level	0.5 – 2.0 Vp-p, 75 ohms, unbalanced
Video output level	1.0 Vp-p, 75 ohms, unbalanced
Horizontal resolution	240 lines (nominal)
Video S/N	43 dB (nominal)

Audio track	3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track)
Hi-Fi Frequency response	20 Hz — 20 KHz
Hi-Fi Dynamic range	More than 90 dB
Hi-Fi Wow and Flutter	Less than 0.01% (nominal)
Audio input level	SCART: – 8 dB, 22 Kohms RCA: – 8 dB, 22 Kohms
Audio output level	SCART: – 8 dB, less than 2.2 Kohms RCA: – 8 dB, less than 2.2 Kohms
Operating temperature	5 °C — 40 °C
Power requirements	230 V AC, 50 Hz
Power consumption	33 watts
Dimensions	380 (W) × 293 (D) × 99 (H) mm (15 × $11^5/_8$ × 4 in.)
Weight	Approx. 4.9 kg (10.78 lbs.)

- Design and specifications are subject to change without notice.

DISASSEMBLY INSTRUCTION

1. "Cabinet,Steel" Removal
   1) Remove five screws and the "Cabinet Steel".

2. "Panel,Front" Removal
   1) Release seven tabs and remove the "Panel,Front".

3. "Front-1 C.B" and "Front-2 C.B" Removal
   1) Release tab and remove the "Front-1 C.B" and "Front-2 C.B".

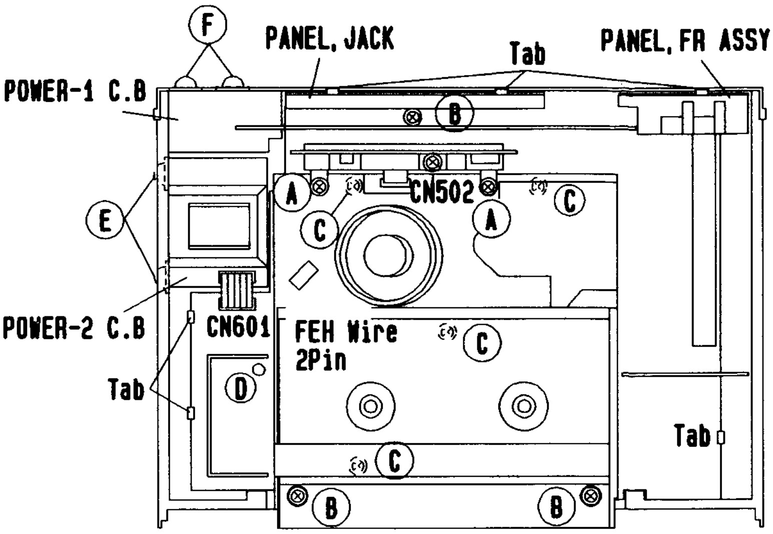


Figure-1

4. "Mechanism" Removal (See Figure-1)
   1) Remove two screws (Ⓐ).
   2) Disconnect connector CN502 the "Head Amp C.B".
   3) Disconnect wire (2Pin) on the "FEH".
   4) Remove three mechanism screw (Ⓑ).

5. "Main C.B" Removal (See Figure-1)
   1) Disconnect connector CN601 the "Main C.B".
   2) Remove six screws (Ⓒ).
   3) Remove screw (Ⓓ).
   4) Release two tabs of the "Panel, Jack" and lift them.
   5) Release tab of the "Panel, RF Assy" and lift them.
   6) Release three tabs of the "Mein C.B " and lift them.

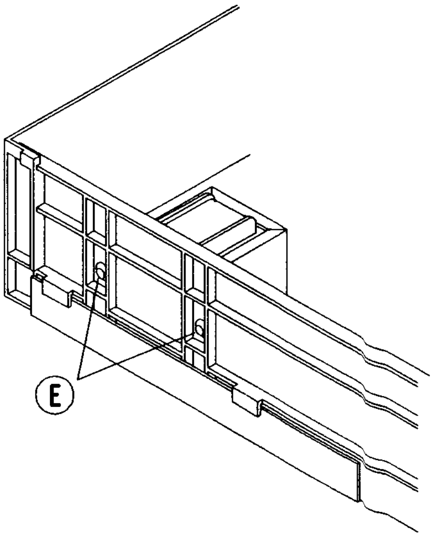


Figure-2

6. "Power-2 C.B" Removal (See Figure-1, Figure-2)
   1) Remove two screws (Ⓔ).

7. "Power-1 C.B" Removal (See Figure-1, Figure-3)
   1) Remove two screws (Ⓕ).

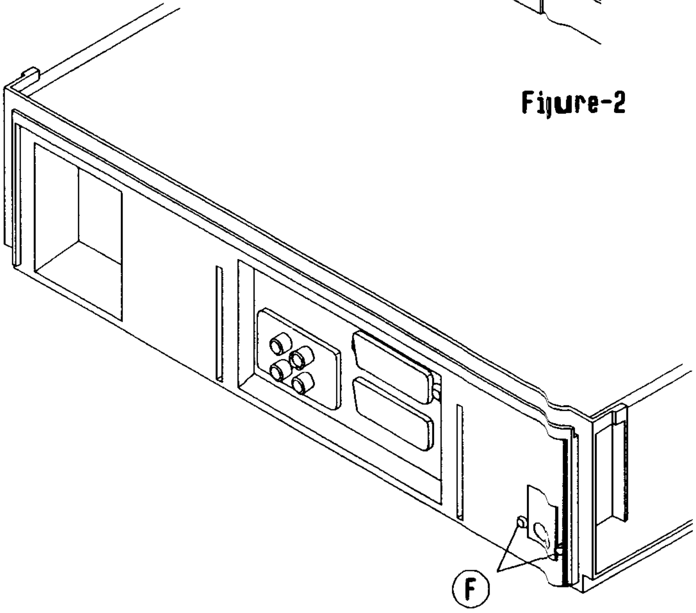


Figure-3

VCR TEST TAPE INTERCHANGEABILITY TABLE

新しいタイプのテストテープは、CH-1 (NTSC用) とCH-2 (PAL用) の2種類があります。それぞれのテープには、(1) ～ (4) で区別する4種類の信号が、次の順番と時間で記録されています。
There are two types of the new allgnment tape CH-1B (for NTSC) and CH-2 (for PAL) . On each tape four signals (1) - (4) are recorded for the times and in the order shown below.

(1) : 8min. → (2) : 2min. → (3) : 5min. → (4) : 5min.

TTV-MP1 (M-PAL用) ,TTV-MS1 (MESECAM用) ,TTV-S1 (SECAM用) については現行通りです。
The TTV-MP1 (for M-PAL) ,TTV-MS1 (for MESECAM) and TTV-S1 (for SECAM) allgnment tapes have the same contents as the previous tapes.

方式 Method	現行タイプ Now in use TYPE		新タイプ New Type		主な用途 Application
	テープ名 Model	記録内容 ※1 Contents ※1	テープ名 Model	記録内容 ※1 Contents ※1	
NTSC	TTV-N1	NTSC,Color, 1kHz,SP	CH-1B(2)	NTSC,Stairsteps, 1kHz,SP	PB-Yﾚﾍﾞﾙ調整等の一般電気調整。ACEﾍｯﾄﾞの高さ/傾き調整。 PB-Y Level/General electrical ADJ.Head ACE Height/Tilt ADJ.
	TTV-N1E	NTSC,Color, 1kHz,EP	CH-1B(4) ※2	NTSC,Color,1kHz, EP	ｽｲｯﾁﾝｸﾞ位置調整。 Switching position ADJ.
	TTV-N2	NTSC,Stairsteps, 7kHz,SP	CH-1B(1)	NTSC,Stairsteps, 7kHz,SP	ACEﾍｯﾄﾞのｱｼﾞﾏｽ調整。ｽｰﾊﾟｰｸﾘｱｰﾋﾟｸﾁｬｰのﾚﾍﾞﾙ調整。 Head ACE Azimuth ADJ.
	TTV-N12 (SCV-1998)	NTSC,Color, 1kHz,SP	CH-1B(4)	NTSC,Color,1kHz, EP	FMｴﾝﾍﾞﾛｰﾌﾟ調整。Xﾊﾞﾘｭｰ(位相)調整。 FM Envelope ADJ. X-Value ADJ.
	TTV-N7A	NTSC,Stairsteps, 1kHz,SP,HiFi400Hz	CH-1B(3)	NTSC,Color,No sound SP,HiFi400Hz	HiFiｵｰﾃﾞｨｵ再生ﾚﾍﾞﾙ調整。 HiFi Audio PB Level ADJ.
PAL	TTV-P1	PAL,Color, 1kHz,SP	CH-2(2) ※3	PAL,Stairsteps, 1kHz,SP	ｽｲｯﾁﾝｸﾞ位置調整。(SP専用ﾓﾃﾞﾙ)PB-Yﾚﾍﾞﾙ調整等の一般電気調整。ACEﾍｯﾄﾞの高さ/傾き調整。 Switching position ADJ. PB-Y Level/General electical ADJ. Head ACE Height/Tilt ADJ.
	TTV-P1L	PAL,Color, 1kHz,LP	CH-2(4)	PAL,Color,1kHz, LP	ｽｲｯﾁﾝｸﾞ位置調整。(LP対応ﾓﾃﾞﾙ)FMｴﾝﾍﾞﾛｰﾌﾟ調整。(LP対応ﾓﾃﾞﾙ) Xﾊﾞﾘｭｰ(位相)調整。(LP対応ﾓﾃﾞﾙ) Switching position.(LP Model)FM Envelope ADJ.(LP Model)X-Value ADJ.(LP Model)
	TTV-P2	PAL,Stairsteps, 6kHz,SP	CH-2(1)	PAL,Stairsteps, 6kHz,SP	ACEﾍｯﾄﾞのｱｼﾞﾏｽ調整。FMｴﾝﾍﾞﾛｰﾌﾟ調整。(SP専用ﾓﾃﾞﾙ)Xﾊﾞﾘｭｰ(位相)調整。(SP専用ﾓﾃﾞﾙ) Head ACE Azimuth ADJ. FM Envelope ADJ.(SP Model) X-Value ADJ.(SP Model)
	TTV-P7	PAL,Stairsteps, 1kHz,SP,HiFi 1kHz	CH-2(3)	PAL,Color,No sound SP,HiFi400Hz	HiFiｵｰﾃﾞｨｵ再生ﾚﾍﾞﾙ調整。 HiFi Audio PB Level ADJ.
	TTV-P16	PAL,Color, 400Hz,SP,HiFi 1kHz	変更なし No Changed.		FMﾌｨﾙﾀｰ調整 FM Filter ADJ.

※ 1.ｶﾗｰ方式→映像信号→ﾉｰﾏﾙ音声→ﾃｰﾌﾟｽﾋﾟｰﾄﾞ→ HiFi 音声 の順で記載されています。
※ 1.Described in the order of color format. video signal. linear audio. tape speed and Hi-Fi audio.
※ 2.SP 専用ﾓﾃﾞﾙの場合は、CH-1B の (1) ～ (3) を使用して下さい。
※ 2.Use CH-1B (1) - (3) with models used exclusively in the SP mode.
※ 3.色信号の観測が必要な場合はCH-2の (3) または (4) を使用して下さい。
※ 3.Use CH-2 (3) and (4) when it is necessary to observe the chroma signal.

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

IC

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
	87-A20-266-010		IC,BA7630S
	87-A20-261-040		C-IC,BA15218F<3500Z,3500ED>
	87-A20-263-040		C-IC,CXA1649M<3500Z,3500ED>
	87-A20-262-010		IC,AN5285K<3500Z,3500ED>
	87-027-656-010		IC,TC4066BP<3500Z,3500ED>
	86-JU1-629-010		C-IC,CXP888P60Q-1-101Q<3500Z>
	86-JU1-624-010		C-IC,CXP888P60Q-1-103<3500ED>
	86-JU2-625-010		C-IC,CXP888P60Q-1-104<2500EH>
	86-JU2-626-010		C-IC,CXP888P60Q-1-105<2500Z>
	87-A20-114-040		C-IC,NJM072M
	87-A20-117-010		IC,BA6418N
	87-017-506-080		C-IC,PST600JMT
	87-A20-302-040		C-IC,24LC04BT/SN
	87-A20-152-010		IC,SDA5649
	87-A20-477-010		C-IC,HA118201CF
	87-A20-181-010		IC,MSM7460-63RS
	86-JU1-625-040		C-IC,LC74763M-9156-TLM
	87-A20-282-010		IC,TDA9840<EXCEPT 3500ED>
	87-A20-304-010		IC,TA8721ASN<EXCEPT 3500ED>
	87-A20-177-010		IC,BA7184S
	87-A20-092-010		IC,LA7256
	87-002-862-010		IC,NJM2904L
	87-017-497-010		IC,GL7809
	87-A20-267-010		IC,SAA7283 ZP<3500ED>
	87-A20-179-010		IC,TDA9614H
	87-017-833-080		C-IC,NJM2233BM<3500Z,3500ED>
	87-001-854-010		IC,BA7755A
	87-A20-208-010		C-IC,MN12510F
	82-NE6-617-010		IC,GP1U581X
	87-070-289-040		C-IC,BU2092F

TRANSISTOR

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
	87-026-211-080		C-TR,DTA144EK
	87-026-210-080		C-TR,DTC144EK
	89-110-372-080		TR,2SA1037KR
	89-324-122-080		C-TR,2SC2412KR
	89-109-521-080		TR,2SA952K
	89-109-340-480		TR,2SA934Q
	89-113-187-880		TR,2SA1318(T/U)
	89-112-965-080		TR,2SA1296GR
	87-A30-032-010		TR,2SD2394
	89-318-155-080		TR,2SC1815GR
	89-215-652-010		TR,2SB1565E
	87-026-213-080		C-TR,DTC114YK
	89-333-317-080		TR,2SC3331T
	87-026-227-080		C-TR,DTA114EK<2500Z,2500EH>
	89-111-625-080		C-TR,2SA1162GR<3500Z,3500ED>

DIODE

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
	87-070-345-080		DIODE,1N4148
	87-027-393-080		ZENER,HZ4C2
	87-017-079-080		ZENER,HZS4A3
	87-070-274-080		DIODE,1N4003 SEM
	87-020-465-080		DIODE,1SS133
⚠	87-017-495-080		DIODE,1N5393
⚠	87-017-415-090		DIODE,RL203
	87-001-239-080		ZENER,HZ30-2
	87-017-135-080		ZENER,HZS12B3
	87-027-400-080		ZENER,HZ5C3
	87-017-519-080		ZENER,HZT-33
	87-027-555-080		ZENER,HZ5C2

MAIN C.B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C101	87-010-154-080		C-CAP,S 10P-50 D CH
C102	87-010-311-080		C-CAP,S 12P-50 J CH
C103	87-010-196-080		C-CAP,S 0.1-25 Z F
C104	87-010-196-080		C-CAP,S 0.1-25 Z F
C105	87-010-196-080		C-CAP,S 0.1-25 Z F
C106	87-010-754-080		CAP,E 220-10 7L SR
C108	87-010-187-080		C-CAP,S 5600P-50 K B
C109	87-015-681-080		CAP,E 10-16 7L SRA
C110	87-015-681-080		CAP,E 10-16 7L SRA
C111	87-010-754-080		CAP,E 220-10 7L SR
C112	87-015-681-080		CAP,E 10-16 7L SRA
C114	87-015-677-080		CAP,E 100-6.3 7L SRA
C118	87-010-314-080		C-CAP,S 22P-50 J CH
C119	87-010-313-080		C-CAP,S 18P-50 J CH
C120	87-010-196-080		C-CAP,S 0.1-25 Z F
C121	87-010-196-080		C-CAP,S 0.1-25 Z F
C122	87-015-677-080		CAP,E 100-6.3 7L SRA
C123	87-010-178-080		C-CAP,S 1000P-50 K B
C125	87-010-182-080		C-CAP,S 2200P-50 K B
C127	87-010-197-080		C-CAP,S 0.01-25 K B
C129	87-010-263-080		CAP,E 100-10 SME
C131	87-010-197-080		C-CAP,S 0.01-25 K B
C132	87-010-178-080		C-CAP,S 1000P-50 K B
C133	87-010-178-080		C-CAP,S 1000P-50 K B
C134	87-010-197-080		C-CAP,S 0.01-25 K B
C137	87-010-197-080		C-CAP,S 0.01-25 K B
C140	87-010-196-080		C-CAP,S 0.1-25 Z F
C141	87-010-178-080		C-CAP,S 1000P-50 K B
C143	87-010-372-080		CAP,E 2200-6.3 SME
C144	87-010-263-080		CAP,E 100-10 SME
C146	87-010-196-080		C-CAP,S 0.1-25 Z F
C147	87-010-197-080		C-CAP,S 0.01-25 K B
C148	87-015-684-080		CAP,E 47-16 7L SRA
C149	87-010-196-080		C-CAP,S 0.1-25 Z F
C150	87-010-197-080		C-CAP,S 0.01-25 K B
C151	87-010-197-080		C-CAP,S 0.01-25 K B
C152	87-012-365-080		C-CAP,S 0.027-25 K B
C153	87-010-196-080		C-CAP,S 0.1-25 Z F
C154	87-015-681-080		CAP,E 10-16 7L SRA
C155	87-015-681-080		CAP,E 10-16 7L SRA
C156	87-015-681-080		CAP,E 10-16 7L SRA
C157	87-015-684-080		CAP,E 47-16 7L SRA
C159	87-010-197-080		C-CAP,S 0.01-25 K B
C160	87-010-197-080		C-CAP,S 0.01-25 K B
C161	87-015-689-080		CAP,E 10-35 7L SRA
C162	87-010-197-080		C-CAP,S 0.01-25 K B
C164	87-010-196-080		C-CAP,S 0.1-25 Z F
C165	87-010-079-080		CAP,E 100-6.3 5L SRE
C166	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C167	87-010-805-080		C-CAP,S 1-16 Z F
C168	87-010-193-080		C-CAP,S 0.033-25 K F
C169	87-010-182-080		C-CAP,S 2200P-50 K B
C170	87-010-196-080		C-CAP,S 0.1-25 Z F
C171	87-015-677-080		CAP,E 100-6.3 7L SRA
C172	87-010-196-080		C-CAP,S 0.1-25 Z F
C173	87-010-196-080		C-CAP,S 0.1-25 Z F
C184	87-010-393-080		CAP,E 100-35 SME
C188	87-010-112-080		CAP,E 100-16 SME
C189	87-010-263-080		CAP,E 100-10 SME
C191	87-010-196-080		C-CAP,S 0.1-25 Z F
C193	87-010-196-080		C-CAP,S 0.1-25 Z F
C194	87-010-196-080		C-CAP,S 0.1-25 Z F
C195	87-010-374-080		CAP,E 47-10 SME
C197	87-010-196-080		C-CAP,S 0.1-25 Z F
C198	87-010-380-080		CAP,E 47-16 SME
C199	87-010-196-080		C-CAP,S 0.1-25 Z F
C202	87-010-196-080		C-CAP,S 0.1-25 Z F
C203	87-010-380-080		CAP,E 47-16 SME
C204	87-010-196-080		C-CAP,S 0.1-25 Z F
C205	87-015-696-080		CAP,E 2.2-50 7L SRA
C206	87-010-198-080		C-CAP,S 0.022-25 K
C207	87-010-197-080		C-CAP,S 0.01-25 K B
C302	87-010-197-080		C-CAP,S 0.01-25 K B
C303	87-010-196-080		C-CAP,S 0.1-25 Z F

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C304	87-010-145-080		C-CAP,S 1P-50 CH
C305	87-010-073-080		CAP,E 3.3-50 5L SRE
C306	87-010-316-080		C-CAP,S 33P-50 J CH
C307	87-012-153-080		C-CAP,S 120P-50 J CH GRM
C308	87-010-419-080		CAP,E 4.7-16 5L SRE
C309	87-010-196-080		C-CAP,S 0.1-25 Z F
C310	87-016-369-080		C-CAP,S 0.033-25 K B
C311	87-010-180-080		C-CAP,S 1500P-50 K B
C312	87-015-694-080		CAP,E 0.47-50 7L SRA
C313	87-010-313-080		C-CAP,S 18P-50 J CH
C314	87-010-146-080		C-CAP,S 2P-50 C CH GRM
C315	87-010-197-080		C-CAP,S 0.01-25 K B
C316	87-010-198-080		C-CAP,S 0.022-25 K B
C317	87-015-694-080		CAP,E 0.47-50 7L SRA
C318	87-010-197-080		C-CAP,S 0.01-25 K B
C320	87-015-681-080		CAP,E 10-16 7L SRA
C321	87-010-196-080		C-CAP,S 0.1-25 Z F
C322	87-015-677-080		CAP,E 100-6.3 7L SRA
C323	87-015-692-080		CAP,E 0.22-50 7L SRA
C324	87-015-681-080		CAP,E 10-16 7L SRA
C325	87-015-694-080		CAP,E 0.47-50 7L SRA
C326	87-015-681-080		CAP,E 10-16 7L SRA
C327	87-015-696-080		CAP,E 2.2-50 7L SRA
C328	87-015-697-080		CAP,E 3.3-50 7L SRA
C329	87-010-196-080		C-CAP,S 0.1-25 Z F
C330	87-010-196-080		C-CAP,S 0.1-25 Z F
C331	87-010-073-080		CAP,E 3.3-50 5L SRE
C341	87-010-198-080		C-CAP,S 0.022-25 K B
C342	87-010-197-080		C-CAP,S 0.01-25 K B
C343	87-010-070-080		CAP,E 0.47-50 5L SRE
C344	87-010-178-080		C-CAP,S 1000P-50 K B
C345	87-010-068-080		CAP,E 0.22-50 5L SRE
C346	87-012-154-080		C-CAP,S 150P-50 J CH GRM
C349	87-010-071-080		CAP,E 1-50 5L SRE
C350	87-010-198-080		C-CAP,S 0.022-25 K B
C351	87-010-197-080		C-CAP,S 0.01-25 K B
C352	87-010-197-080		C-CAP,S 0.01-25 K B
C353	87-010-196-080		C-CAP,S 0.1-25 Z F
C354	87-010-079-080		CAP,E 100-6.3 5L SRE
C355	87-010-197-080		C-CAP,S 0.01-25 K B
C356	87-010-197-080		C-CAP,S 0.01-25 K B
C357	87-010-196-080		C-CAP,S 0.1-25 Z F
C359	87-010-312-080		C-CAP,S 15P-50 J CH
C360	87-010-312-080		C-CAP,S 15P-50 J CH
C361	87-010-321-080		C-CAP,S 82P-50 J CH
C362	87-012-145-080		C-CAP,S 270P-50 J CH
C363	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C364	87-010-198-080		C-CAP,S 0.022-25 K B
C365	87-010-196-080		C-CAP,S 0.1-25 Z F
C366	87-010-176-080		C-CAP,S 680P-50 J SL
C367	87-012-153-080		C-CAP,S 120P-50 J CH GRM
C368	87-010-178-080		C-CAP,S 1000P-50 K B
C370	87-010-263-080		CAP,E 100-10 SME
C371	87-010-198-080		C-CAP,S 0.022-25 K B
C372	87-015-676-080		CAP,E 47-6.3 7L SRA
C373	87-010-197-080		C-CAP,S 0.01-25 K B
C374	87-010-197-080		C-CAP,S 0.01-25 K B
C376	87-010-318-080		C-CAP,S 47P-50 J CH
C377	87-010-318-080		C-CAP,S 47P-50 J CH
C378	87-010-316-080		C-CAP,S 33P-50 J CH
C379	87-012-156-080		C-CAP,S 220P-50 J CH GRM
C381	87-010-196-080		C-CAP,S 0.1-25 Z F
C392	87-010-145-080		C-CAP,S 1P-50 CH
C393	87-010-318-080		C-CAP,S 47P-50 J CH
C396	87-010-319-080		C-CAP,S 56P-50 J CH
C397	87-010-312-080		C-CAP,S 15P-50 J CH
C399	87-010-196-080		C-CAP,S 0.1-25 Z F
C401	87-010-196-080		C-CAP,S 0.1-25 Z F
C403	87-010-401-080		CAP,E 1-50 SME
C404	87-012-155-080		C-CAP,S 180P-50 J CH GRM

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C405	87-010-196-080		C-CAP,S 0.1-25 Z F
C406	87-010-263-080		CAP,E 100-10 SME
C407	87-010-196-080		C-CAP,S 0.1-25 Z F
C408	87-010-401-080		CAP,E 1-50 SME
C409	87-010-197-080		C-CAP,S 0.01-25 K B
C410	87-010-148-080		C-CAP,S 4P-50 CH
C411	87-010-314-080		C-CAP,S 22P-50 J CH
C412	87-010-196-080		C-CAP,S 0.1-25 Z F
C413	87-010-153-080		C-CAP,S 9P-50 D CH
C414	87-010-153-080		C-CAP,S 9P-50 D CH
C415	87-015-695-080		CAP,E 1-50 7L SRA
C416	87-010-197-080		C-CAP,S 0.01-25 K B
C417	87-010-263-080		CAP,E 100-10 SME
C420	87-010-071-080		CAP,E 1-50 5L SRE
C421	87-010-196-080		C-CAP,S 0.1-25 Z F
C422	87-010-805-080		C-CAP,S 1-16 Z F
C424	87-010-198-080		C-CAP,S 0.022-25 K B
C425	87-010-314-080		C-CAP,S 22P-50 J CH
C426	87-010-149-080		C-CAP,S 5P-50 CH
C427	87-010-314-080		C-CAP,S 22P-50 J CH
C428	87-010-070-080		CAP,E 0.47-50 5L SRE
C429	87-010-079-080		CAP,E 100-6.3 5L SRE
C430	87-010-196-080		C-CAP,S 0.1-25 Z F
C431	87-010-196-080		C-CAP,S 0.1-25 Z F
C432	87-010-316-080		C-CAP,S 33P-50 J CH
C433	87-010-196-080		C-CAP,S 0.1-25 Z F
C605	87-016-661-090		CAP,E 4700-25 105 TKR
C606	87-010-112-080		CAP,E 100-16 SME
C607	87-010-263-080		CAP,E 100-10 SME
C608	87-010-112-080		CAP,E 100-16 SME
C609	87-016-451-090		CAP,E 10000-16 TKR
C610	87-010-263-080		CAP,E 100-10 SME
C611	87-010-263-080		CAP,E 100-10 SME
C612	87-010-260-080		CAP,E 47-25 SME
C615	87-016-300-080		CAP,E 22-100 SME
C616	87-016-285-080		CAP,E 47-100 SME
C617	87-010-405-080		CAP,E 10-50 SME
C618	87-010-405-080		CAP,E 10-50 SME
C620	87-010-196-080		C-CAP,S 0.1-25 Z F
C621	87-012-368-080		C-CAP,S 0.1-50 Z F
C801	87-010-374-080		CAP,E 47-10 SME
C802	87-010-196-080		C-CAP,S 0.1-25 Z F
C803	87-010-196-080		C-CAP,S 0.1-25 Z F
C804	87-010-196-080		C-CAP,S 0.1-25 Z F
C805	87-010-263-080		CAP,E 100-10 SME
C806	87-010-196-080		C-CAP,S 0.1-25 Z F
C807	87-010-404-080		CAP,E 4.7-50 SME
C808	87-010-197-080		C-CAP,S 0.01-25 K B
C809	87-010-263-080		CAP,E 100-10 SME
C810	87-010-197-080		C-CAP,S 0.01-25 K B
C811	87-010-196-080		C-CAP,S 0.1-25 Z F
C812	87-010-374-080		CAP,E 47-10 SME
C813	87-010-198-080		C-CAP,S 0.022-25 K B
C814	87-010-197-080		C-CAP,S 0.01-25 K B
C815	87-010-404-080		CAP,E 4.7-50 SME
C816	87-010-197-080		C-CAP,S 0.01-25 K B
C817	87-010-404-080		CAP,E 4.7-50 SME
C818	87-010-196-080		C-CAP,S 0.1-25 Z F
C819	87-010-197-080		C-CAP,S 0.01-25 K B
C820	87-010-374-080		CAP,E 47-10 SME
C821	87-010-402-080		CAP,E 2.2-50 SME
C822	87-010-374-080		CAP,E 47-10 SME
C823	87-010-196-080		C-CAP,S 0.1-25 Z F
C825	87-012-157-080		C-CAP,S 330P-50 J CH GRM
C826	87-010-394-080		CAP,E 220-35 SME
C827	87-012-368-080		C-CAP,S 0.1-50 Z F
C831	87-010-374-080		CAP,E 47-10 SME
C832	87-010-197-080		C-CAP,S 0.01-25 K B
C833	87-010-194-080		C-CAP,S 0.047-25 K B
C835	87-010-197-080		C-CAP,S 0.01-25 K B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C840	87-010-197-080		C-CAP,S 0.01-25 K B
C841	87-010-197-080		C-CAP,S 0.01-25 K B
C842	87-010-197-080		C-CAP,S 0.01-25 K B
D102	87-070-418-010		LED,LN66A RED
D103	87-070-288-010		LED,GL380
D104	87-070-288-010		LED,GL380
⚠F601	87-035-454-010		FUSE,1.6A 250V T 218
⚠F602	87-035-454-010		FUSE,1.6A 250V T 218
⚠FC601	87-A90-160-080		FUSE CLAMP,FC 51F
⚠FC602	87-A90-160-080		FUSE CLAMP,FC 51F
⚠FC603	87-A90-160-080		FUSE CLAMP,FC 51F
⚠FC604	87-A90-160-080		FUSE CLAMP,FC 51F
L101	87-005-432-080		COIL,10UH K FLR50
L102	87-005-440-080		COIL,47UH K FLR50
L103	87-005-440-080		COIL,47UH K FLR50
L104	87-005-440-080		COIL,47UH K FLR50
L105	87-005-432-080		COIL,10UH K FLR50
L106	87-005-647-080		COIL,10UH K LF5.0S
L107	87-005-440-080		COIL,47UH K FLR50
L108	87-005-647-080		COIL,10UH K LF5.0S
L301	87-005-686-080		COIL,15UH J LF5.0S
L302	87-005-684-080		COIL,10UH J LF5.0S
L303	87-005-691-080		COIL,39UH J LF5.0S
L304	87-005-440-080		COIL,47UH K FLR50
L305	87-005-440-080		COIL,47UH K FLR50
L307	87-005-686-080		COIL,15UH J LF5.0S
L308	87-005-686-080		COIL,15UH J LF5.0S
L309	87-005-692-080		COIL,47UH J LF5.0S
L310	87-005-700-080		COIL,220UH J LF5.0S
L311	87-005-688-080		COIL,22UH J LF5.0S
L313	87-005-691-080		COIL,39UH J LF5.0S
L314	87-005-692-080		COIL,47UH J LF5.0S
L315	87-005-688-080		COIL,22UH J LF5.0S
L316	87-005-700-080		COIL,220UH J LF5.0S
L323	87-005-695-080		COIL,82UH J LF5.0S
L325	87-005-688-080		COIL,22UH J LF5.0S
L326	87-005-440-080		COIL,47UH K FLR50
L327	87-005-694-080		COIL,68UH J LF5.0S
L328	87-005-440-080		COIL,47UH K FLR50
L330	87-005-839-080		COIL,5.6UH G LF5.0S
L331	87-005-440-080		COIL,47UH K FLR50
L801	87-005-440-080		COIL,47UH K FLR50
L802	87-005-440-080		COIL,47UH K FLR50
L803	87-005-440-080		COIL,47UH K FLR50
L804	87-005-440-080		COIL,47UH K FLR50
L805	87-005-432-080		COIL,10UH K FLR50
L806	87-005-440-080		COIL,47UH K FLR50
Q102	87-026-698-010		P-TR,PT-34R2S
Q105	87-026-698-010		P-TR,PT-34R2S
Q107	87-026-697-010		P-TR,PN168
Q109	87-026-697-010		P-TR,PN168
R611	87-A00-121-090		RES,M/F 3.9K-1W J
⚠R614	87-029-107-010		RES,FUSE 3.3-1/4W J
⚠R616	87-029-374-010		RES,FUSE 47-1/4W J
SFR101	87-024-172-080		SFR,10K DIA6V
SW101	87-A90-083-010		SW,PUSH MPU10480MLB
SW102	87-A90-083-010		SW,PUSH MPU10480MLB
SW801	87-A90-166-010		SW,SL SLD-12-500H
TU801	86-JU1-645-010		TU UNIT, TMUG4-104A BG
X101	87-A70-045-080		VIB,XTAL 16.0MHZ UNIDEN
X102	87-030-273-010		VIB,XTAL 32.768KHZ DT-38 5PPM
X301	87-A70-019-080		VIB,XTAL 4.43MHZ
X302	83-JU3-666-080		VIB,XTAL 17.73MHZ

FRONT-1 C.B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C901	87-010-079-080		CAP,E 100-6.3 5L SRE
C902	87-010-197-080		C-CAP,S 0.01-25 K B
C903	87-010-079-080		CAP,E 100-6.3 5L SRE
C904	87-010-197-080		C-CAP,S 0.01-25 K B
C905	87-018-134-080		CAP,TC-U 0.01-16 N Y UP050
C906	87-010-076-080		CAP,E 22-6.3 5L SRE
C907	87-010-071-080		CAP,E 1-50 5L SRE
C908	87-018-209-080		CAP,TC-U 0.1-50 Z F UP050
D921	87-A40-009-080		LED,SLP3117E-51ST1GR <2500Z,2500EH>
D922	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D923	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D924	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D925	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D926	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D927	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D928	87-A40-009-080		LED,SLP3117E-51ST1 GR <2500Z,2500EH>
D929	87-017-761-010		LED,GL3ED8 Y-GRN/RED <2500Z,2500EH>
D930	87-017-761-010		LED,GL3ED8 Y-GRN/RED <2500Z,2500EH>
FL901	86-JU1-641-010		FL,10BT-108GK
L901	87-005-684-080		COIL,10UH J LF5.0S
L902	87-005-684-080		COIL,10UH J LF5.0S
SW901	87-A90-137-010		SW,JOG HMW1103-21<3500Z,3500ED>
SW902	87-036-215-080		SW,TACT EVQ 214 04M <3500Z,3500ED>
SW903	87-036-215-080		SW,TACT EVQ 214 04M <3500Z,3500ED>
SW904	87-036-215-080		SW,TACT EVQ 214 04M <2500Z,2500EH>
SW905	87-036-215-080		SW,TACT EVQ 214 04M <2500Z,2500EH>
SW906	87-036-215-080		SW,TACT EVQ 214 04M <3500Z,3500ED>
SW907	87-036-215-080		SW,TACT EVQ 214 04M <3500Z,3500ED>
SW910	87-036-215-080		SW,TACT EVQ 214 04M <2500Z,2500EH>
SW911	87-036-215-080		SW,TACT EVQ 214 04M <2500Z,2500EH>
SW912	87-036-215-080		SW,TACT EVQ 214 04M <2500Z,2500EH>
SW913	87-036-215-080		SW,TACT EVQ 214 04M <2500Z,2500EH>
X901	87-030-198-080		VIB,CER 4.000MHZ KBR MKS

FRONT-2 C.B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
D958	87-070-425-080		LED,SLZ-381B-02T-AB-T2 P-GRN
D959	87-A90-200-080		LED, SEL2910A-ORG TP <3500Z,3500ED>
SW951	87-036-215-080		SW,TACT EVQ 214 04M
SW952	87-036-215-080		SW,TACT EVQ 214 04M
SW953	87-036-215-080		SW,TACT EVQ 214 04M
SW954	87-036-215-080		SW,TACT EVQ 214 04M
SW955	87-036-215-080		SW,TACT EVQ 214 04M
SW956	87-036-215-080		SW,TACT EVQ 214 04M <3500Z,3500ED>
SW957	87-036-215-080		SW,TACT EVQ 214 04M <3500Z,3500ED>

FRONT-3 C.B<3500Z,3500ED>

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C971	87-010-197-080		C-CAP,S 0.01-25 K B <3500Z,3500ED>
D971	87-017-761-010		LED,GL3ED8 Y-GRN/RED <3500Z,3500ED>
D972	87-017-761-010		LED,GL3ED8 Y-GRN/RED <3500Z,3500ED>
D973	87-017-761-010		LED,GL3ED8 Y-GRN/RED <3500Z,3500ED>
D974	87-017-761-010		LED,GL3ED8 Y-GRN/RED <3500Z,3500ED>

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
D975	87-017-761-010		LED,GL3ED8 Y-GRN/RED <3500Z,3500ED>
D976	87-017-761-010		LED,GL3ED8 Y-GRN/RED <3500Z,3500ED>

HEAD AMP C.B

C501	87-010-182-080		C-CAP,S 2200P-50 K B
C502	87-010-196-080		C-CAP,S 0.1-25 Z F
C503	87-010-317-080		C-CAP,S 39P-50 J CH
C505	87-010-196-080		C-CAP,S 0.1-25 Z F
C506	87-010-196-080		C-CAP,S 0.1-25 Z F
C507	87-010-196-080		C-CAP,S 0.1-25 Z F
C508	87-010-196-080		C-CAP,S 0.1-25 Z F
C509	87-010-317-080		C-CAP,S 39P-50 J CH
C510	87-010-314-080		C-CAP,S 22P-50 J CH
C511	87-010-314-080		C-CAP,S 22P-50 J CH
C512	87-010-196-080		C-CAP,S 0.1-25 Z F
C513	87-015-677-080		CAP,E 100-6.3 7L SRA
C514	87-010-805-080		C-CAP,S 1-16 Z F
C515	87-010-198-080		C-CAP,S 0.022-25 K B
C516	87-010-198-080		C-CAP,S 0.022-25 K B
C520	87-010-196-080		C-CAP,S 0.1-25 Z F
C521	87-010-312-080		C-CAP,S 15P-50 J CH
C522	87-010-312-080		C-CAP,S 15P-50 J CH
C524	87-010-198-080		C-CAP,S 0.022-25 K B
C525	87-010-317-080		C-CAP,S 39P-50 J CH
C526	87-010-196-080		C-CAP,S 0.1-25 Z F
C527	87-010-196-080		C-CAP,S 0.1-25 Z F
C528	87-010-196-080		C-CAP,S 0.1-25 Z F
C552	87-010-197-080		C-CAP,S 0.01-25 K B
C553	87-010-197-080		C-CAP,S 0.01-25 K B
C554	87-010-197-080		C-CAP,S 0.01-25 K B
C555	87-010-196-080		C-CAP,S 0.1-25 Z F
C556	87-015-684-080		CAP,E 47-16 7L SRA
C557	87-010-154-080		C-CAP,S 10P-50 D CH
C558	87-010-196-080		C-CAP,S 0.1-25 Z F
C559	87-010-196-080		C-CAP,S 0.1-25 Z F
C560	87-010-197-080		C-CAP,S 0.01-25 K B
C561	87-010-197-080		C-CAP,S 0.01-25 K B
C562	87-010-197-080		C-CAP,S 0.01-25 K B
C563	87-010-196-080		C-CAP,S 0.1-25 Z F
C565	87-010-316-080		C-CAP,S 33P-50 J CH
FCB702	86-JU1-654-010		F-CABLE, HA
L501	87-005-440-080		COIL,47UH K FLR50
L503	87-005-685-080		COIL,12UH J LF5.0S
L504	87-005-692-080		COIL,47UH J LF5.0S
L551	87-005-444-080		COIL,100UH K FLR50

JACK C.B<3500Z,3500ED>

C772	87-010-176-080		C-CAP,S 680P-50 J SL <3500Z,3500ED>
C773	87-010-176-080		C-CAP,S 680P-50 J SL <3500Z,3500ED>
C774	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
FCB701	86-JU1-653-010		F-CABLE, FRONT<3500Z,3500ED>
J701	87-099-632-010		JACK,PIN 3P R/W/Y<3500Z,3500ED>

HIFI/CANAL-1 C.B<3500Z,3500ED>

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C1	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C2	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C3	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C4	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C5	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C6	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C7	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C8	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C9	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C10	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C12	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C14	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C15	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C16	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C17	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C18	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C19	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C20	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C23	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C24	87-A10-205-080		CAP,E 470-6.3 SRG <3500Z,3500ED>
C25	87-015-695-080		CAP,E 1-50 7L SRA <3500Z,3500ED>
C26	87-015-695-080		CAP,E 1-50 7L SRA<3500Z,3500ED>
C27	87-015-696-080		CAP,E 2.2-50 7L SRA <3500Z,3500ED>
C28	87-015-677-080		CAP,E 100-6.3 7L SRA <3500Z,3500ED>
C29	87-010-196-080		C-CAP,S 0.1-25 Z F <3500Z,3500ED>
C30	87-015-695-080		CAP,E 1-50 7L SRA<3500Z,3500ED>
C33	87-A10-205-080		CAP,E 470-6.3 SRG<3500Z,3500ED>
C34	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C36	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C38	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C39	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C40	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C41	87-012-154-080		C-CAP,S 150P-50 J CH GRM <3500Z,3500ED>
C42	87-010-197-080		C-CAP,S 0.01-25 K B <3500Z,3500ED>
C43	87-010-197-080		C-CAP,S 0.01-25 K B <3500Z,3500ED>
C45	87-015-681-080		CAP,E 10-16 7L SRA <3500Z,3500ED>
C46	87-015-692-080		CAP,E 0.22-50 7L SRA <3500Z,3500ED>
C47	87-010-405-080		CAP,E 10-50 SME<3500Z,3500ED>
C48	87-010-060-080		CAP,E 100-16 7L SRA <3500Z,3500ED>
C49	87-010-405-080		CAP,E 10-50 SME<3500Z,3500ED>
C50	87-010-401-080		CAP,E 1-50 SME<3500Z,3500ED>
C51	87-010-405-080		CAP,E 10-50 SME<3500Z,3500ED>
C52	87-010-405-080		CAP,E 10-50 SME<3500Z,3500ED>
C53	87-015-688-080		CAP,E 4.7-35 7L SRA <3500Z,3500ED>
C54	87-015-695-080		CAP,E 1-50 7L SRA<3500Z,3500ED>
C55	87-010-401-080		CAP,E 1-50 SME<3500Z,3500ED>
C56	87-010-401-080		CAP,E 1-50 SME<3500Z,3500ED>
C57	87-015-692-080		CAP,E 0.22-50 7L SRA <3500Z,3500ED>

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C58	87-010-401-080		CAP,E 1-50 SME<3500Z,3500ED>
C59	87-010-546-080		CAP,E 0.33-50 SME<3500Z,3500ED>
C60	87-010-380-080		CAP,E 47-16 SME<3500Z,3500ED>
C61	87-010-401-080		CAP,E 1-50 SME<3500Z,3500ED>
C62	87-015-695-080		CAP,E 1-50 7L SRA<3500Z,3500ED>
C63	87-010-380-080		CAP,E 47-16 SME<3500Z,3500ED>
C65	87-010-405-080		CAP,E 10-50 SME<3500Z,3500ED>
C66	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C67	87-010-182-080		C-CAP,S 2200P-50 K B <3500Z,3500ED>
C68	87-010-182-080		C-CAP,S 2200P-50 K B <3500Z,3500ED>
C99	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C703	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C704	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C705	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C706	87-015-684-080		CAP,E 47-16 7L SRA<3500Z,3500ED>
C707	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C708	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C709	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C710	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C711	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C712	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C713	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C714	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C715	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C716	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C717	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C718	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C719	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C720	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C721	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C722	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C723	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C724	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C725	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C726	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C727	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C728	87-010-194-080		C-CAP,S 0.047-25 K F <3500Z,3500ED>
C729	87-010-197-080		C-CAP,S 0.01-25 K B <3500Z,3500ED>
C730	87-010-198-080		C-CAP,S 0.022-25 K B <3500Z,3500ED>
C731	87-010-183-080		C-CAP,S 2700P-50 K B <3500Z,3500ED>
C732	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C733	87-015-688-080		CAP,E 4.7-35 7L SRA <3500Z,3500ED>
C734	87-010-180-080		C-CAP,S 1500P-50 K B <3500Z,3500ED>
C735	87-A10-202-080		CAP,E 47-16 105 KRL <3500Z,3500ED>
C736	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C737	87-010-186-080		C-CAP,S 4700P-50 K B <3500Z,3500ED>
C738	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C739	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C740	87-015-696-080		CAP,E 2.2-50 7L SRA <3500Z,3500ED>

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C741	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C742	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C743	87-010-186-080		C-CAP,S 4700P-50 K B <3500Z,3500ED>
C744	87-012-141-080		C-CAP,S 0.22-16 Z F <3500Z,3500ED>
C745	87-015-684-080		CAP,E 47-16 7L SRA<3500Z,3500ED>
C746	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C747	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C748	87-010-198-080		C-CAP,S 0.022-25 K B <3500Z,3500ED>
C749	87-010-198-080		C-CAP,S 0.022-25 K B <3500Z,3500ED>
C750	87-015-684-080		CAP,E 47-16 7L SRA<3500Z,3500ED>
C751	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C752	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C753	87-010-322-080		C-CAP,S 100P-50 J CH <3500Z,3500ED>
C754	87-015-696-080		CAP,E 2.2-50 7L SRA <3500Z,3500ED>
C755	87-015-681-080		CAP,E 10-16 7L SRA<3500Z,3500ED>
C756	87-010-178-080		C-CAP,S 1000P-50 K B <3500Z,3500ED>
C757	87-A10-212-080		CAP,M 0.022-100 J<3500Z,3500ED>
C758	87-012-156-080		C-CAP,S 220P-50 J CH GRM <3500Z,3500ED>
C759	87-015-684-080		CAP,E 47-16 7L SRA<3500Z,3500ED>
C760	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C761	87-010-182-080		C-CAP,S 2200P-50 K B <3500Z,3500ED>
C770	87-015-684-080		CAP,E 47-16 7L SRA<3500Z,3500ED>
C771	87-010-197-080		C-CAP,S 0.01-25 K B <3500Z,3500ED>
C777	87-015-688-080		CAP,E 4.7-35 7L SRA <3500Z,3500ED>
C790	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
C791	87-010-196-080		C-CAP,S 0.1-25 Z F<3500Z,3500ED>
FB1	87-003-223-080		F-BEAD, BL02RN2<3500Z,3500ED>
J1	87-A60-239-010		JACK,PIN 4P 01244N<3500Z,3500ED>
L1	87-005-444-080		COIL,100UH K FLR50<3500Z,3500ED>
L701	87-005-684-080		COIL,10UH J LF5.0S<3500Z,3500ED>
L702	87-003-131-080		COIL,10MH J EL0607<3500Z,3500ED>
L703	87-005-152-080		COIL,10UH K LAL03<3500Z,3500ED>
L704	87-005-684-080		COIL,10UH J LF5.0S<3500Z,3500ED>
L705	87-005-684-080		COIL,10UH J LF5.0S<3500Z,3500ED>
L706	87-005-684-080		COIL,10UH J LF5.0S<3500Z,3500ED>
L707	86-JU1-655-010		COIL,BIAS AE<3500Z,3500ED>
L708	86-JU1-652-010		COIL,BIAS K7-T3<3500Z,3500ED>

HIFI/CANAL-2 C.B<2500Z,2500EH>

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C1	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C2	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C3	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C4	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C5	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C6	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C7	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C8	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C9	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C10	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C12	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C14	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C15	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C16	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C17	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C18	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C19	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C20	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C23	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C24	87-A10-205-080		CAP;E 470-6.3 SRG<2500Z,2500EH>
C25	87-015-695-080		CAP,E 1-50 7L SRA<2500Z,2500EH>
C26	87-015-695-080		CAP,E 1-50 7L SRA<2500Z,2500EH>
C27	87-015-696-080		CAP,E 2.2-50 7L SRA <2500Z,2500EH>
C28	87-015-677-080		CAP,E 100-6.3 7L SRA <2500Z,2500EH>
C29	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C30	87-015-695-080		CAP,E 1-50 7L SRA<2500Z,2500EH>
C33	87-A10-205-080		CAP,E 470-6.3 SRG<2500Z,2500EH>
C34	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C36	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C38	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C39	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C40	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C41	87-012-154-080		C-CAP,S 150P-50 J CH GRM <2500Z,2500EH>
C42	87-010-197-080		C-CAP,S 0.01-25 K B <2500Z,2500EH>
C43	87-010-197-080		C-CAP,S 0.01-25 K B <2500Z,2500EH>
C99	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C703	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C704	87-018-209-080		CAP,TC-U 0.1-50 Z F UP050 <2500Z,2500EH>
C705	87-018-209-080		CAP,TC-U 0.1-50 Z F UP050 <2500Z,2500EH>
C706	87-015-684-080		CAP,E 47-16 7L SRA<2500Z,2500EH>
C707	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C708	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C709	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C710	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C711	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C712	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C713	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C714	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C715	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C716	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C717	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C718	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C721	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C723	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C724	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C725	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C726	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C727	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C728	87-010-194-080		C-CAP,S 0.047-25 K F <2500Z,2500EH>
C729	87-010-197-080		C-CAP,S 0.01-25 K B <2500Z,2500EH>
C730	87-010-198-080		C-CAP,S 0.022-25 K B <2500Z,2500EH>
C731	87-010-183-080		C-CAP,S 2700P-50 K B <2500Z,2500EH>
C732	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C733	87-015-688-080		CAP,E 4.7-35 7L SRA <2500Z,2500EH>
C734	87-010-180-080		C-CAP,S 1500P-50 K B <2500Z,2500EH>
C735	87-A10-202-080		CAP,E 47-16 105 KRL <2500Z,2500EH>
C736	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C737	87-010-186-080		C-CAP,S 4700P-50 K B <2500Z,2500EH>
C738	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C739	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C740	87-015-696-080		CAP,E 2.2-50 7L SRA <2500Z,2500EH>
C741	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C742	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C743	87-010-186-080		C-CAP,S 4700P-50 K B <2500Z,2500EH>
C744	87-012-141-080		C-CAP,S 0.22-16 Z F <2500Z,2500EH>
C745	87-015-684-080		CAP,E 47-16 7L SRA<2500Z,2500EH>
C746	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C747	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C748	87-018-205-080		CAP,TC-U 0.022-25 Z F TP <2500Z,2500EH>
C749	87-018-205-080		CAP,TC-U 0.022-25 Z F TP <2500Z,2500EH>
C750	87-015-684-080		CAP,E 47-16 7L SRA<2500Z,2500EH>
C751	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C752	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
C753	87-010-322-080		C-CAP,S 100P-50 J CH <2500Z,2500EH>
C754	87-015-696-080		CAP,E 2.2-50 7L SRA <2500Z,2500EH>
C755	87-015-681-080		CAP,E 10-16 7L SRA<2500Z,2500EH>
C756	87-010-178-080		C-CAP,S 1000P-50 K B <2500Z,2500EH>
C758	87-012-156-080		C-CAP,S 220P-50 J CH GRM <2500Z,2500EH>
C770	87-015-684-080		CAP,E 47-16 7L SRA <2500Z,2500EH>
C771	87-010-197-080		C-CAP,S 0.01-25 K B <2500Z,2500EH>
C790	87-010-196-080		C-CAP,S 0.1-25 Z F<2500Z,2500EH>
FB1	87-003-223-080		F-BEAD, BL02RN2<2500Z,2500EH>
J1	87-A60-239-010		JACK,PIN 4P 01244N<2500Z,2500EH>
L1	87-005-444-080		COIL,100UH K FLR50<2500Z,2500EH>
L701	87-005-684-080		COIL,10UH J LF5.0S<2500Z,2500EH>
L702	87-003-131-080		COIL,10MH J EL0607<2500Z,2500EH>
L703	87-005-152-080		COIL,10UH K LAL03<2500Z,2500EH>
L704	87-005-684-080		COIL,10UH J LF5.0S<2500Z,2500EH>
L707	85-JU7-631-010		COIL,OSC7 70KHZ<2500Z,2500EH>

ZWEITON C.B<EXCEPT 3500ED>

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C451	87-010-196-080		C-CAP,S 0.1-25 Z F <EXCEPT 3500ED>
C452	87-010-248-080		CAP,E 220-10 SME<EXCEPT 3500ED>
C453	87-010-428-080		C-CAP,S 0.015<EXCEPT 3500ED>
C454	87-010-428-080		C-CAP,S 0.015<EXCEPT 3500ED>
C455	87-010-263-080		CAP,E 100-10 SME<EXCEPT 3500ED>
C458	87-010-178-080		C-CAP,S 1000P-50 K B <EXCEPT 3500ED>
C459	87-015-689-080		CAP,E 10-35 7L SRA <EXCEPT 3500ED>

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C460	87-010-197-080		C-CAP,S 0.01-25 K B <EXCEPT 3500ED>
C461	87-010-196-080		C-CAP,S 0.1-25 Z F <EXCEPT 3500ED>
C462	87-010-263-080		CAP,E 100-10 SME <EXCEPT 3500ED>
C463	87-010-402-080		CAP,E 2.2-50 SME<EXCEPT 3500ED>
C464	87-010-318-080		C-CAP,S 47P-50 J CH <EXCEPT 3500ED>
C465	87-010-402-080		CAP,E 2.2-50 SME<EXCEPT 3500ED>
C468	87-010-178-080		C-CAP,S 1000P-50 K B <EXCEPT 3500ED>
C477	87-010-197-080		C-CAP,S 0.01-25 K B <EXCEPT 3500ED>
C479	87-010-197-080		C-CAP,S 0.01-25 K B <EXCEPT 3500ED>
C482	87-010-196-080		C-CAP,S 0.1-25 Z F <EXCEPT 3500ED>
C483	87-018-134-080		CAP,TC-U 0.01-16 N Y UP050 <EXCEPT 3500ED>
C484	87-010-316-080		C-CAP,S 33P-50 J CH <EXCEPT 3500ED>
C485	87-010-404-080		CAP,E 4.7-50 SME<EXCEPT 3500ED>
C486	87-010-317-080		C-CAP,S 39P-50 J CH <EXCEPT 3500ED>
C487	87-018-114-080		CAP,TC-U 39P-50 J SL UP050 <EXCEPT 3500ED>
C490	87-010-321-080		C-CAP,S 82P-50 J CH <EXCEPT 3500ED>
C491	87-010-320-080		C-CAP,S 68P-50 J CH <EXCEPT 3500ED>
C492	87-010-197-080		C-CAP,S 0.01-25 K B <EXCEPT 3500ED>
C493	87-010-196-080		C-CAP,S 0.1-25 Z F <EXCEPT 3500ED>
L451	87-005-485-080		COIL,100UH J FLR50 <EXCEPT 3500ED>
L454	87-005-485-080		COIL,100UH J FLR50 <EXCEPT 3500ED>
L455	87-005-684-080		COIL,10UH J LF5.0S <EXCEPT 3500ED>
L456	87-A50-097-010		COIL,126ANS-A3561HM <EXCEPT 3500ED>
SFR451	87-024-272-080		SFR,10K V RH0632C<EXCEPT 3500ED>
X451	87-A70-041-080		VIB,XTAL 10MHZ<EXCEPT 3500ED>
X453	87-A90-184-080		FLTR, SFE5.74MC2<EXCEPT 3500ED>
X454	87-A90-204-080		FLTR,CER CDSH5.74MC39K <EXCEPT 3500ED>

NICAM C.B<3500ED>

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
C651	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C652	87-010-374-080		CAP,E 47-10 SME<3500ED>
C653	87-010-197-080		C-CAP,S 0.01-25 K B<3500ED>
C655	87-010-545-080		CAP,E 0.22-50 SME<3500ED>
C657	87-010-178-080		C-CAP,S 1000P-50 K B<3500ED>
C658	87-010-374-080		CAP,E 47-10 SME<3500ED>
C659	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C660	87-010-178-080		C-CAP,S 1000P-50 K B<3500ED>
C663	87-010-545-080		CAP,E 0.22-50 SME<3500ED>
C664	87-010-194-080		C-CAP,S 0.047-25 K F<3500ED>
C665	87-010-405-080		CAP,E 10-50 SME<3500ED>
C666	87-010-374-080		CAP,E 47-10 SME<3500ED>
C667	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C669	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C670	87-010-405-080		CAP,E 10-50 SME<3500ED>
C671	87-010-154-080		C-CAP,S 10P-50 D CH<3500ED>
C672	87-010-405-080		CAP,E 10-50 SME<3500ED>
C673	87-012-156-080		C-CAP,S 220P-50 J CH GRM<3500ED>
C674	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C675	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C676	87-010-405-080		CAP,E 10-50 SME<3500ED>
C677	87-010-401-080		CAP,E 1-50 SME<3500ED>
C680	87-010-322-080		C-CAP,S 100P-50 J CH<3500ED>
C681	87-010-322-080		C-CAP,S 100P-50 J CH<3500ED>
C683	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C684	87-010-374-080		CAP,E 47-10 SME<3500ED>
C685	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C688	87-016-087-080		C-CAP,S 0.47-16 FZ<3500ED>
C689	87-010-197-080		C-CAP,S 0.01-25 K B<3500ED>
C690	87-010-197-080		C-CAP,S 0.01-25 K B<3500ED>
C691	87-010-374-080		CAP,E 47-10 SME<3500ED>
C692	87-018-134-080		CAP,TC-U 0.01-16 N Y UP050 <3500ED>
C693	87-010-197-080		C-CAP,S 0.01-25 K B<3500ED>
C694	87-010-196-080		C-CAP,S 0.1-25 Z F<3500ED>
C695	87-010-374-080		CAP,E 47-10 SME<3500ED>
D652	87-020-743-080		VARI-CAP,MA341BTX<3500ED>
L651	87-005-444-080		COIL,100UH K FLR50<3500ED>
L652	87-005-444-080		COIL,100UH K FLR50<3500ED>
L653	87-005-471-080		COIL,6.8UH J FLR50<3500ED>
L654	87-005-444-080		COIL,100UH K FLR50<3500ED>
X651	87-A70-029-080		VIB,XTAL 8.192MHZ<3500ED>

POWER-1 C.B

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
⚠F641	87-035-449-010		FUSE,500MA 250V T 218
⚠FC641	87-A90-160-080		FUSE CLAMP,FC 51F
⚠FC642	87-A90-160-080		FUSE CLAMP,FC 51F
⚠J641	87-A60-021-010		JACK,AC E HJC-028
⚠L641	87-030-274-010		FLTR,LINE LF-4D-333
⚠L642	87-A90-227-010		FLTR,27UH LU-10H-270A

POWER-2 C.B

REF.NO	PART NO.	カンリ NO.	DESCRIPTION
⚠PT641	86-JU1-630-010		PT,KE

FE C.B

BASE C.B

CM C.B

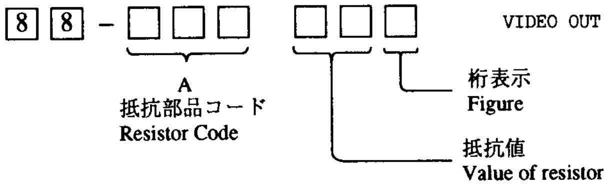
DM LEAD C.B

ACE HEAD C.B

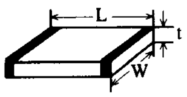
VIDEO OUT C.B

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

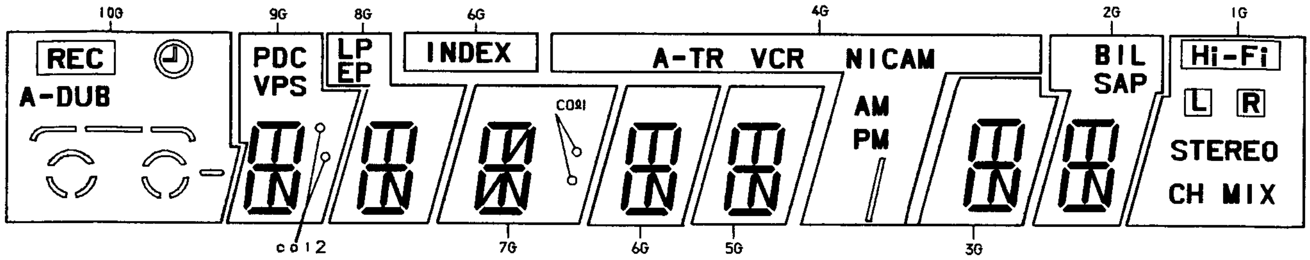


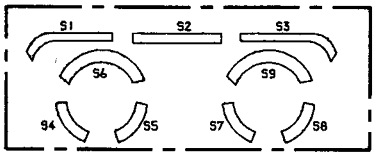
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード：A Resistor Code：A
				外形／Form	L	W	t	
1／16W	1608	±5%	CJ		1.6	0.8	0.45	108
1／10W	2125	±5%	CJ		2	1.25	0.45	118
1／8W	3216	±5%	CJ		3.2	1.6	0.55	128

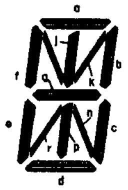
FL DISPLAY

GRID ASSIGNMENT


10G
9G
8G
6G
4G
2G
1G
REC
A-DUB
PDC
VPS
LP
EP
INDEX
A-TR VCR NICAM
BIL
SAP
Hi-Fi
L
R
AM
PM
STEREO
CH MIX
COL1
col2
7G
6G
5G
3G


S1
S2
S3
S4
S5
S6
S7
S8
S9

(10G)

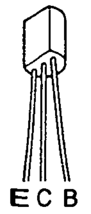

a
b
c
d
f
j
k
g
n
p
r

(9G∼5G . 3G∼2G)

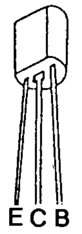
ANODE CONNECTION

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S1	a	a	a	a	a	I	a	a	—
P2	S2	j	j	j	j	j	A	j	j	—
P3	S3	b	b	b	b	b	M (UP)	b	b	—
P4	S4	f	f	f	f	f	P(DOWN)	f	f	—
P5	S5	g	g	g	g	g	M	g	g	—
P6	S6	c	c	c	c	c	NICOM	c	c	—
P7	S7	•	•	•	•	•	A-TR	•	•	—
P8	S8	p	p	p	p	p	VCR	p	p	HI-FI
P9	S9	n	n	n	n	n	—	n	n	L
P10	⬭	d	d	d	d	d	—	d	d	R
P11	A-DUB	VPS	—	r	INDEX	—	—	—	BIL	STEREO
P12	🕒	PDC	LP	k	—	—	—	—	SAP	MIX
P13	REC	COL2	EP	COL1	—	—	—	—	—	CH

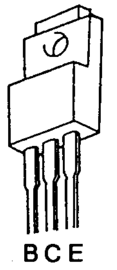
TRANSISTOR ILLUSTRATION



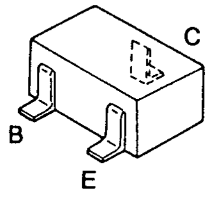
2SA952
2SA1296
2SA1318
2SC1815
2SC3331



2SA934

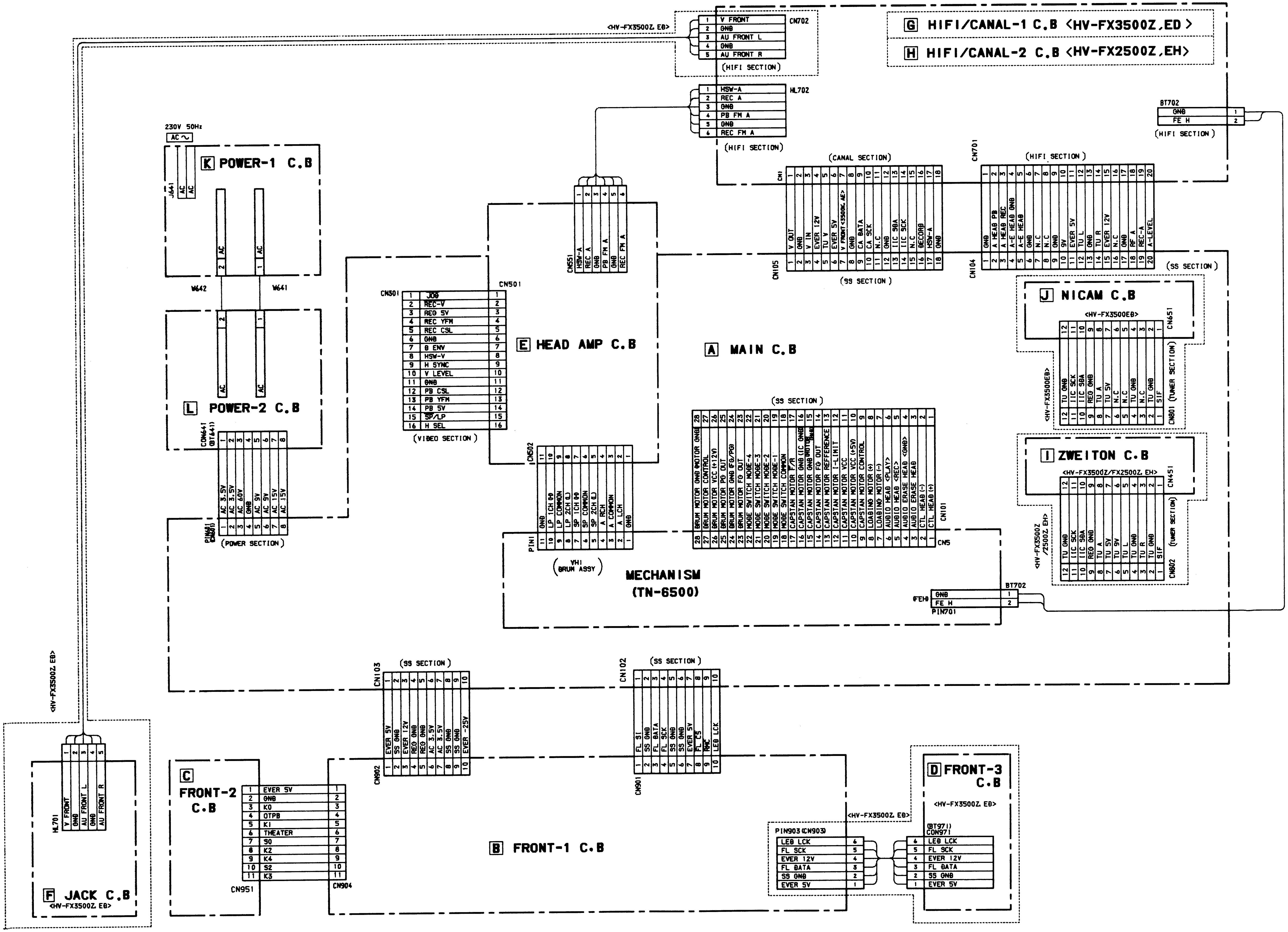


2SB1565
2SD2394

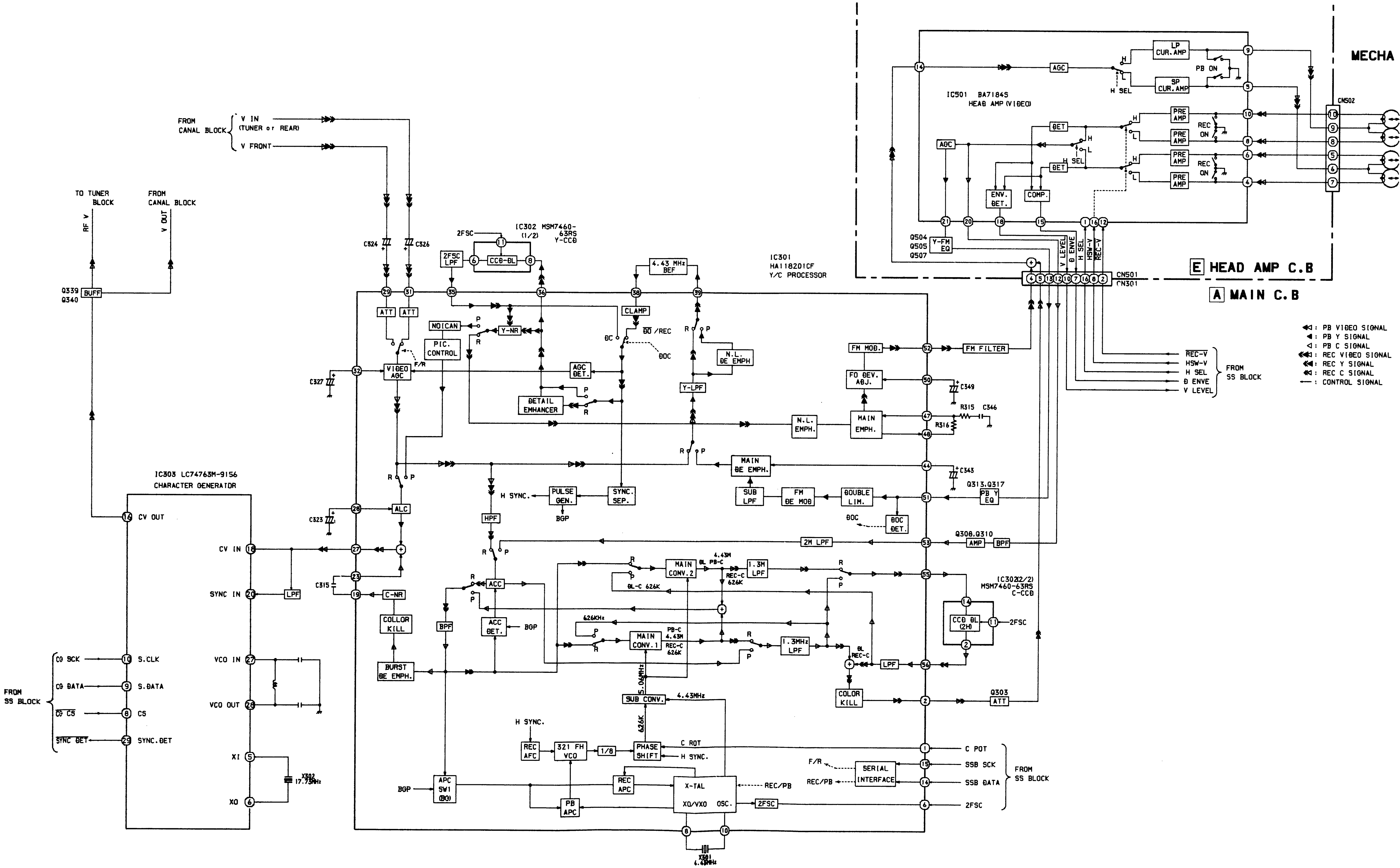


2SA1037K
2SA1162
2SC2412K
DTA144EK
DTC114YK
DTC144EK

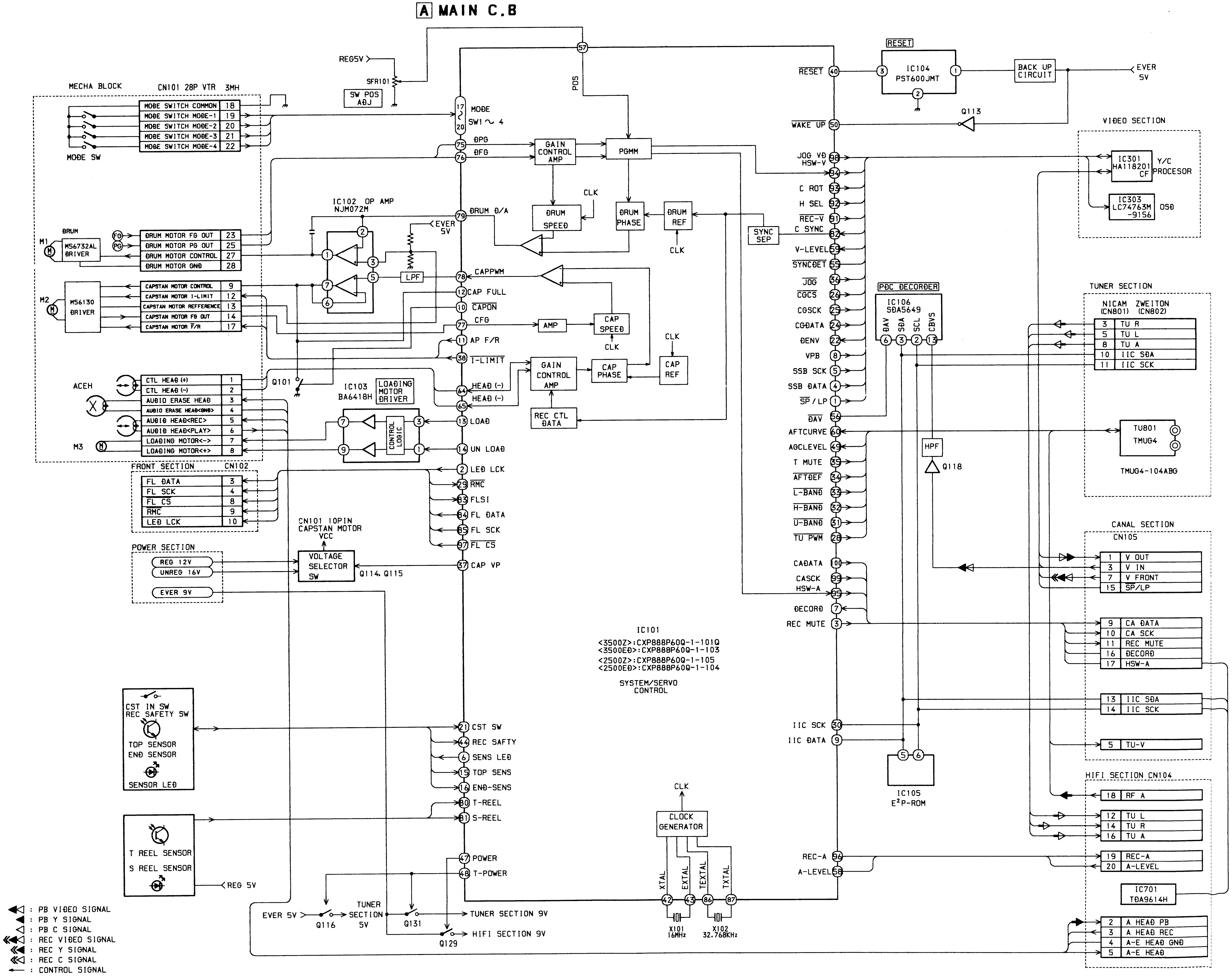
WIRE HARNESS DIAGRAM


G HIFI/CANAL-1 C.B <HV-FX3500Z,ED>
H HIFI/CANAL-2 C.B <HV-FX2500Z,EH>
<HV-FX3500Z ED>
CN702
1 V FRONT
2 GND
3 AU FRONT L
4 GND
5 AU FRONT R
(HIFI SECTION)
HL702
1 HSW-A
2 REC A
3 GND
4 PB FM A
5 GND
6 REC FM A
(HIFI SECTION)
BT702
GND 1
FE H 2
(HIFI SECTION)
230V 50Hz
AC ~
K POWER-1 C.B
J641
AC
AC
W642
W641
L POWER-2 C.B
CON641 (BT641)
PIN901 CN901
1 AC 3.5V
2 AC 3.5V
3 AC 60V
4 GND
5 AC 9V
6 AC 9V
7 AC 15V
8 AC 15V
(POWER SECTION)
CN501
1 JOG
2 REC-V
3 REG 5V
4 REC YFM
5 REC CSL
6 GND
7 B ENV
8 HSW-V
9 H SYNC
10 V LEVEL
11 GND
12 PB CSL
13 PB YFM
14 PB 5V
15 SP/LP
16 H SEL
(VIDEO SECTION)
E HEAD AMP C.B
CN551
1 HSW-A
2 REC A
3 GND
4 PB FM A
5 GND
6 REC FM A
CN502
PIN1
11 GND
10 LP 1CH (+)
9 LP COMMON
8 LP 2CH (L)
7 SP 1CH (+)
6 SP COMMON
5 SP 2CH (L)
4 A RCH
3 A COMMON
2 A LCH
1 GND
VH1
DRUM ASSY
MECHANISM
(TN-6500)
A MAIN C.B
(CANAL SECTION)
CN1
CN105
1 V OUT
2 GND
3 V IN
4 EVER 12V
5 TU V
6 EVER 5V
7 V FRONT <3500W, AE>
8 GND
9 CA DATA
10 CA SCK
11 N.C
12 GND
13 IIC SDA
14 IIC SCK
15 N.C
16 RECORD
17 HSW-A
18 GND
(SS SECTION)
CN701
CN104
(HIFI SECTION)
1 GND
2 A HEAD PB
3 A HEAD REC
4 A-E HEAD GND
5 A-E HEAD
6 GND
7 N.C
8 N.C
9 9V
10 EVER 5V
11 TU L
12 GND
13 TU R
14 EVER 12V
15 N.C
16 GND
17 RF-A
18 REC-A
19 A-LEVEL
20
(SS SECTION)
J NICAM C.B
<HV-FX3500ED>
CN651
CN801 (TUNER SECTION)
<HV-FX3500ED>
12 TU GND
11 IIC SCK
10 IIC SDA
9 REG GND
8 TU A
7 TU 5V
6 N.C
5 N.C
4 TU GND
3 N.C
2 TU GND
1 SIF
I ZWEITON C.B
<HV-FX3500Z/FX2500Z, EH>
CN451
CN802 (TUNER SECTION)
<HV-FX3500Z /2500Z EH>
12 TU GND
11 IIC SCK
10 IIC SDA
9 REG GND
8 TU A
7 TU 5V
6 TU 9V
5 TU L
4 TU GND
3 TU R
2 TU GND
1 SIF
(SS SECTION)
CN101
CN5
28 DRUM MOTOR GND (MOTOR GND)
27 DRUM MOTOR CONTROL
26 DRUM MOTOR VCC (+12V)
25 DRUM MOTOR PG OUT
24 DRUM MOTOR GND (FG/PG)
23 DRUM MOTOR FG OUT
22 MODE SWITCH MODE-4
21 MODE SWITCH MODE-3
20 MODE SWITCH MODE-2
19 MODE SWITCH MODE-1
18 MODE SWITCH COMMON
17 CAPSTAN MOTOR F/R
16 CAPSTAN MOTOR GND (IC GND)
15 CAPSTAN MOTOR GND (MOTOR GND)
14 CAPSTAN MOTOR FG OUT
13 CAPSTAN MOTOR REFFERENCE
12 CAPSTAN MOTOR I-LIMIT
11 CAPSTAN MOTOR VCC
10 CAPSTAN MOTOR VCC (+5V)
9 CAPSTAN MOTOR CONTROL
8 LOADING MOTOR (+)
7 LOADING MOTOR (-)
6 AUDIO HEAD <PLAY>
5 AUDIO HEAD <REC>
4 AUDIO ERASE HEAD <GND>
3 AUDIO ERASE HEAD
2 CTL HEAD (-)
1 CTL HEAD (+)
BT702
(FEH)
GND 1
FE H 2
PIN701
CN103
(SS SECTION)
CN902
1 EVER 5V
2 SS GND
3 EVER 12V
4 REG GND
5 REG GND
6 AC 3.5V
7 AC 3.5V
8 SS GND
9 SS GND
10 EVER -25V
CN102
(SS SECTION)
CN901
1 FL SI
2 SS GND
3 FL DATA
4 FL SCK
5 SS GND
6 SS GND
7 EVER 5V
8 FL CS
9 RMC
10 LED LCK
<HV-FX3500Z ED>
HL701
1 V FRONT
2 GND
3 AU FRONT L
4 GND
5 AU FRONT R
F JACK C.B
<HV-FX3500Z ED>
C FRONT-2 C.B
1 EVER 5V 1
2 GND 2
3 K0 3
4 OTPB 4
5 K1 5
6 THEATER 6
7 S0 7
8 K2 8
9 K4 9
10 S2 10
11 K3 11
CN951
CN904
B FRONT-1 C.B
<HV-FX3500Z ED>
PIN903 (CN903)
LED LCK 6
FL SCK 5
EVER 12V 4
FL DATA 3
SS GND 2
EVER 5V 1
D FRONT-3 C.B
<HV-FX3500Z ED>
(BT971) CON971
6 LED LCK
5 FL SCK
4 EVER 12V
3 FL DATA
2 SS GND
1 EVER 5V

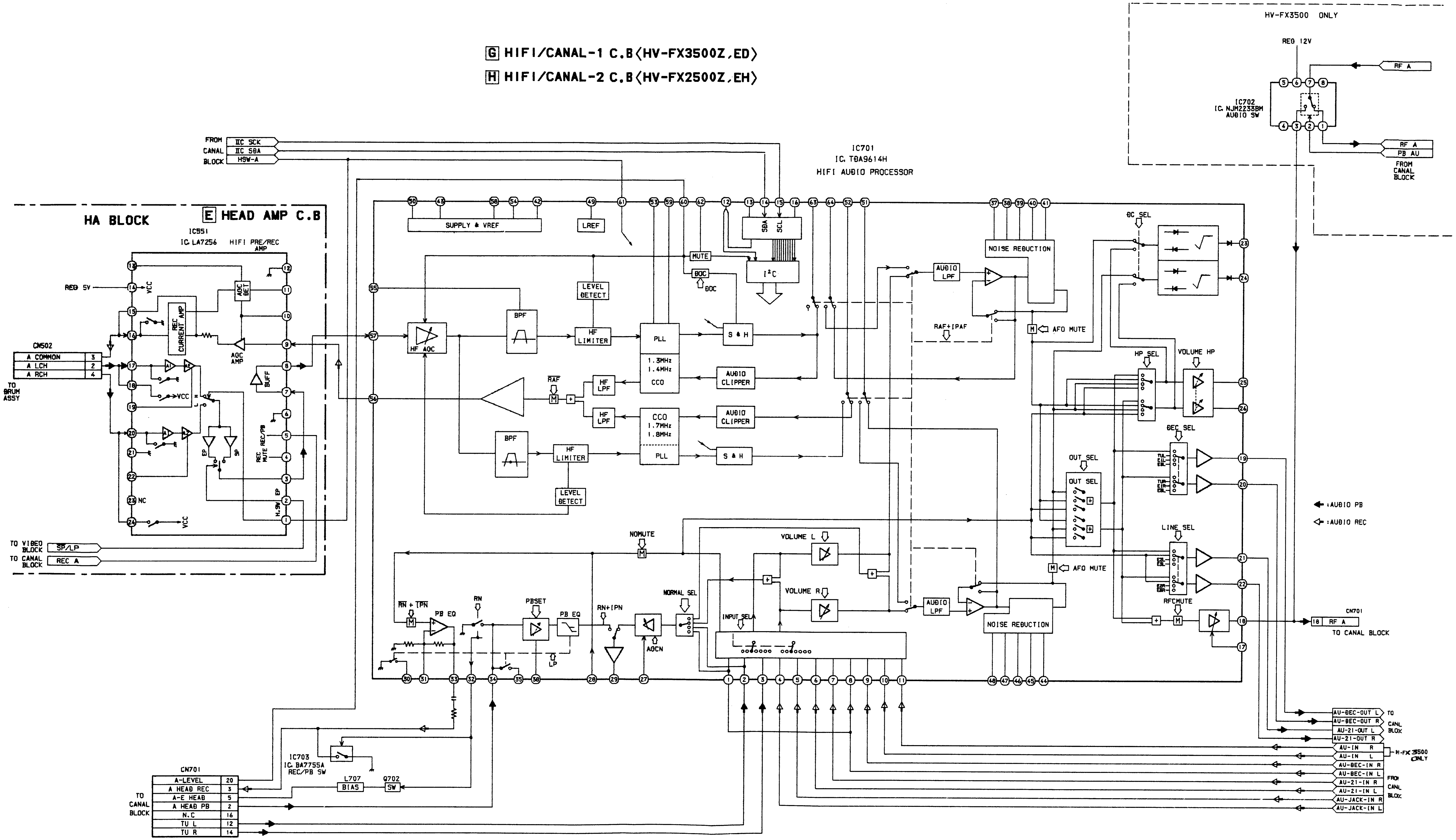
BLOCK DIAGRAM – 1 (VIDEO SECTION)


MECHA
CN502
1ch
2ch
LP
SP
E HEAD AMP C.B
A MAIN C.B
IC501 BA7184S
HEAD AMP (VIDEO)
LP CUR. AMP
SP CUR. AMP
PB ON
AGC
H SEL
PRE AMP
REC ON
DET
ENV. DET.
COMP.
Q504
Q505
Q507
Y-FM EQ
V LEVEL
D ENVE
H SEL
HSW-V
REC-V
CN501
CN301
FROM CANAL BLOCK
V IN (TUNER or REAR)
V FRONT
TO TUNER BLOCK
RF V
FROM CANAL BLOCK
V OUT
Q339
Q340
BUFF
C324
C326
2FSC
IC302 MSM7460-63RS (1/2) Y-CCD
2FSC LPF
CCD-DL
4.43 MHz DEF
IC301
HA118201CF
Y/C PROCESSOR
ATT
NOICAN
Y-NR
PIC. CONTROL
VIDEO AGC
F/R
C327
AGC DET.
DETAIL EMHANCER
CLAMP
DOC
DO /REC
N.L. DE EMPH
Y-LPF
FM MOD.
FM FILTER
FO DEV. ADJ.
C349
R315
C346
R316
N.L. EMPH.
MAIN EMPH.
MAIN DE EMPH.
C343
Q313, Q317
PB Y EQ
SUB LPF
FM DE MOD
DOUBLE LIM.
DOC DET.
PULSE GEN.
SYNC. SEP.
H SYNC.
BGP
HPF
ALC
C323
IC303 LC74763M-9156
CHARACTER GENERATOR
CV OUT
CV IN
SYNC IN
LPF
C315
C-NR
COLLOR KILL
BURST DE EMPH.
BPF
ACC
ACC DET.
2M LPF
Q308, Q310
AMP
BPF
MAIN CONV. 2
DL PB-C
4.43M
REC-C 626K
DL-C 626K
1.3M LPF
IC302(2/2)
MSM7460-63RS
C-CCD
CCD DL (2H)
626KHz
MAIN CONV. 1
PB-C 4.43M
REC-C 626K
1.3MHz LPF
DL REC-C
COLOR KILL
Q303
ATT
SUB CONV.
4.43MHz
5.06MHz
626K
H SYNC.
REC AFC
321 FH VCO
1/8
PHASE SHIFT
C ROT
APC SW1 (DG)
REC APC
PB APC
X-TAL
XO/VXO OSC.
REC/PB
F/R
SERIAL INTERFACE
2FSC
X301
4.43MHz
C ROT
SSB SCK
SSB DATA
FROM SS BLOCK
REC-V
HSW-V
H SEL
D ENVE
V LEVEL
FROM SS BLOCK
CD SCK
CD DATA
CD CS
SYNC DET
FROM SS BLOCK
S.CLK
S.DATA
CS
SYNC.DET
VCO IN
VCO OUT
XI
XO
X302
17.73MHz
◀◁ : PB VIDEO SIGNAL
◀ : PB Y SIGNAL
◁ : PB C SIGNAL
«◀◁ : REC VIDEO SIGNAL
«◀ : REC Y SIGNAL
«◁ : REC C SIGNAL
← : CONTROL SIGNAL

BLOCK DIAGRAM – 2 (SYSTEM CONTROL/SERVO SECTION)

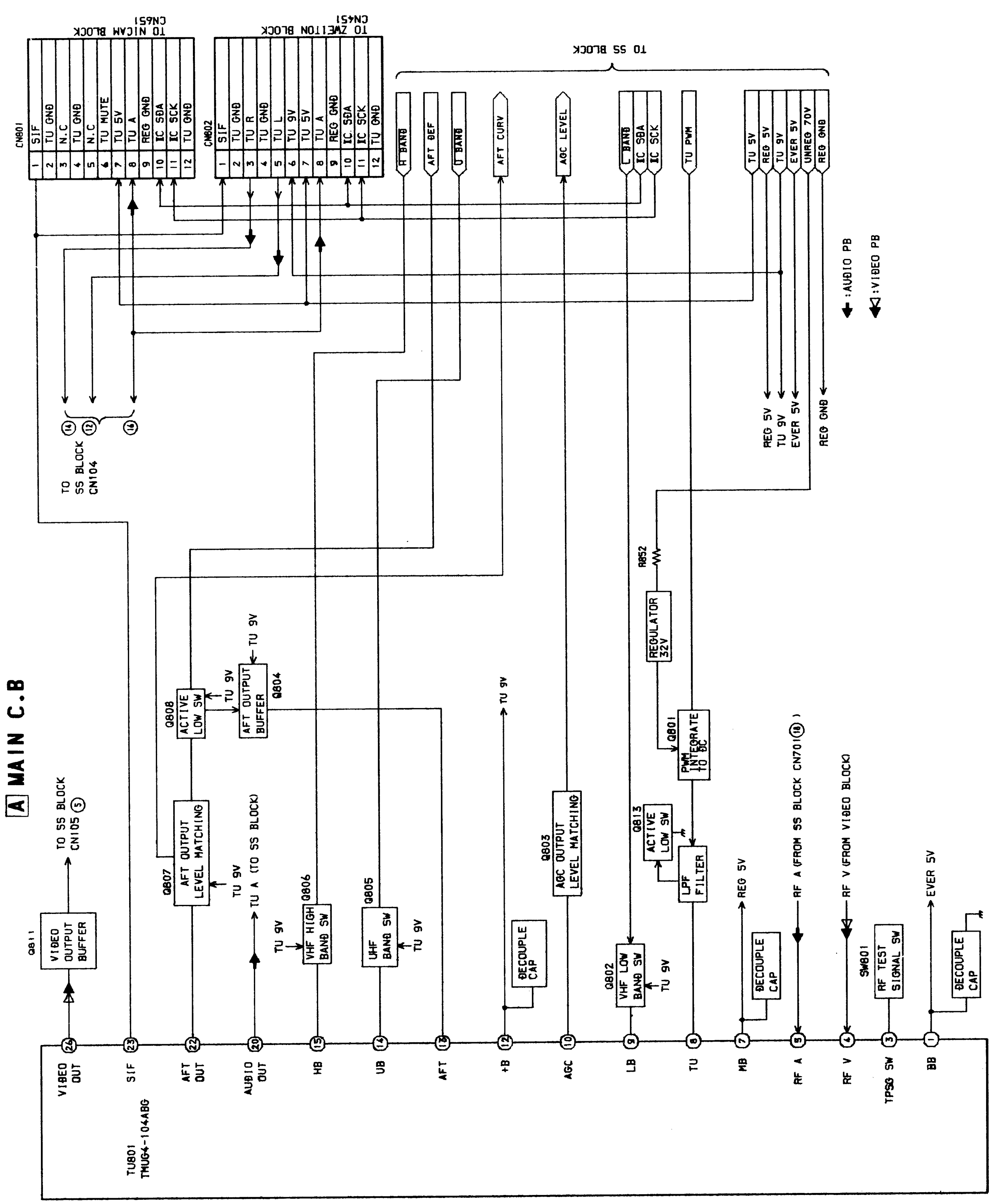

A MAIN C.B
MECHA BLOCK
CN101 28P VTR 3MH
MODE SWITCH COMMON 18
MODE SWITCH MODE-1 19
MODE SWITCH MODE-2 20
MODE SWITCH MODE-3 21
MODE SWITCH MODE-4 22
MODE SW
DRUM
M1
M56732AL DRIVER
FG
PG
DRUM MOTOR FG OUT 23
DRUM MOTOR PG OUT 25
DRUM MOTOR CONTROL 27
DRUM MOTOR GND 28
M2
M56130 DRIVER
CAPSTAN MOTOR CONTROL 9
CAPSTAN MOTOR I-LIMIT 12
CAPSTAN MOTOR REFFERENCE 13
CAPSTAN MOTOR FG OUT 14
CAPSTAN MOTOR F/R 17
ACEH
CTL HEAD (+) 1
CTL HEAD (–) 2
AUDIO ERASE HEAD 3
AUDIO ERASE HEAD<GND> 4
AUDIO HEAD<REC> 5
AUDIO HEAD<PLAY> 6
LOADING MOTOR<–> 7
LOADING MOTOR<+> 8
M3
FRONT SECTION CN102
FL DATA 3
FL SCK 4
FL CS 8
RMC 9
LED LCK 10
POWER SECTION
REG 12V
UNREG 16V
EVER 9V
CN101 10PIN CAPSTAN MOTOR
VCC
VOLTAGE SELECTOR SW
Q114, Q115
REG5V
SFR101
SW POS ADJ
IC102 OP AMP NJM072M
EVER 5V
LPF
IC103 BA6418H
LOADING MOTOR DRIVER
CONTROL LOGIC
Q101
CST IN SW
REC SAFETY SW
TOP SENSOR
END SENSOR
SENSOR LED
T REEL SENSOR
S REEL SENSOR
REG 5V
EVER 5V
Q116
TUNER SECTION 5V
Q131
Q129
TUNER SECTION 9V
HIFI SECTION 9V
57
POS
17 ~ 20 MODE SW1 ~ 4
75 DPG
76 DFG
79 DRUM D/A
78 CAPPWM
12 CAP FULL
10 CAPON
77 CFG
11 AP F/R
38 I-LIMIT
64 HEAD (–)
65 HEAD (–)
13 LOAD
14 UN LOAD
2 LED LCK
29 RMC
83 FLSI
84 FL DATA
85 FL SCK
97 FL CS
37 CAP VP
21 CST SW
44 REC SAFTY
6 SENS LED
15 TOP SENS
16 END-SENS
80 T-REEL
81 S-REEL
47 POWER
48 T-POWER
GAIN CONTROL AMP
PGMM
DRUM SPEED
DRUM PHASE
DRUM REF
CLK
SYNC SEP
AMP
CAP SPEED
CAP PHASE
CAP REF
GAIN CONTROL AMP
REC CTL DATA
IC101
<3500Z>:CXP888P60Q-1-101Q
<3500ED>:CXP888P60Q-1-103
<2500Z>:CXP888P60Q-1-105
<2500ED>:CXP888P60Q-1-104
SYSTEM/SERVO CONTROL
CLOCK GENERATOR
XTAL 42
EXTAL 43
TEXTAL 86
TXTAL 87
X101 16MHz
X102 32.768KHz
RESET 40
WAKE UP 50
JOG VD 38
HSW-V 94
C ROT 93
H SEL 92
REC-V 91
C SYNC 82
V-LEVEL 59
SYNCDET 55
JOG 36
CGCS 26
CGSCK 25
CGDATA 24
DENV 22
VPB 8
SSB SCK 5
SSB DATA 4
SP/LP 1
DAV 56
AFTCURVE 60
AGCLEVEL 49
T MUTE 35
AFTDEF 34
L-BAND 33
H-BAND 32
U-BAND 31
TU PWM 28
CADATA 100
CASCK 99
HSW-A 95
DECORD 7
REC MUTE 3
IIC SCK 30
IIC DATA 9
REC-A 96
A-LEVEL 58
RESET
IC104 PST600JMT
BACK UP CIRCUIT
EVER 5V
Q113
PDC DECORDER
IC106 SDA5649
DAV SDA SCL CBVS
HPF
Q118
IC105 E²P-ROM
VIDEO SECTION
IC301 HA118201CF Y/C PROCESOR
IC303 LC74763M-9156 OSD
TUNER SECTION
NICAM ZWEITON (CN801) (CN802)
3 TU R
5 TU L
8 TU A
10 IIC SDA
11 IIC SCK
TU801 TMUG4
TMUG4-104ABG
CANAL SECTION
CN105
1 V OUT
3 V IN
7 V FRONT
15 SP/LP
9 CA DATA
10 CA SCK
11 REC MUTE
16 DECORD
17 HSW-A
13 IIC SDA
14 IIC SCK
5 TU-V
HIFI SECTION CN104
18 RF A
12 TU L
14 TU R
16 TU A
19 REC-A
20 A-LEVEL
IC701 TDA9614H
2 A HEAD PB
3 A HEAD REC
4 A-E HEAD GND
5 A-E HEAD
◀◁ : PB VIDEO SIGNAL
◀ : PB Y SIGNAL
◁ : PB C SIGNAL
◀◀◁ : REC VIDEO SIGNAL
◀◀ : REC Y SIGNAL
◀◁ : REC C SIGNAL
←— : CONTROL SIGNAL

BLOCK DIAGRAM – 3 (AUDIO SECTION)

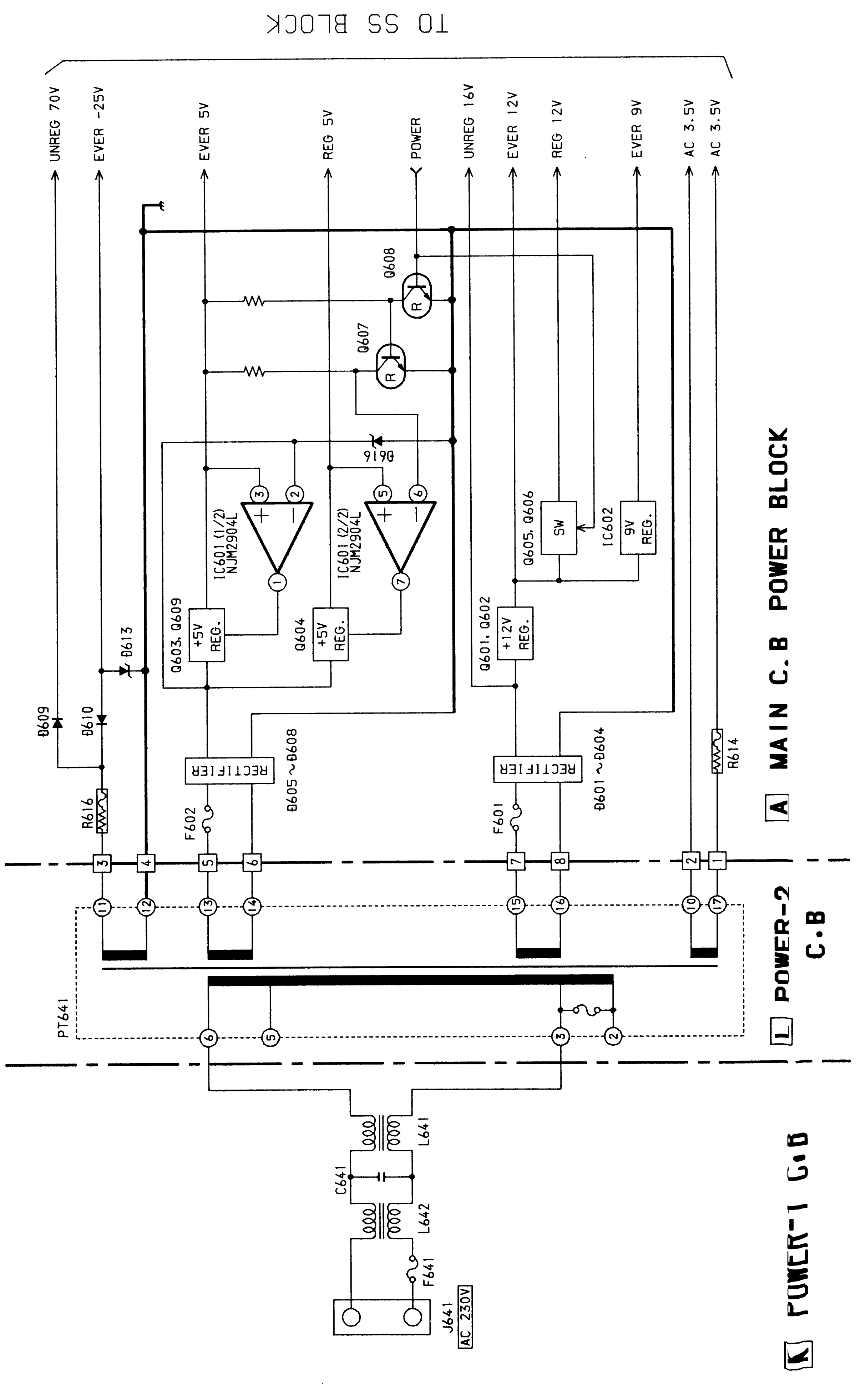


G HIFI/CANAL-1 C.B〈HV-FX3500Z,ED〉
H HIFI/CANAL-2 C.B〈HV-FX2500Z,EH〉
HV-FX3500 ONLY
REC 12V
IC702
IC NJM2233BM
AUDIO SW
RF A
RF A
PB AU
FROM CANAL BLOCK
FROM CANAL BLOCK
IIC SCK
IIC SDA
HSW-A
IC701
IC TDA9614H
HIFI AUDIO PROCESSOR
HA BLOCK
E HEAD AMP C.B
IC551
IC LA7256 HIFI PRE/REC AMP
REC 5V
VCC
REC CURRENT AMP
AGC DET
AGC AMP
BUFF
REC MUTE REC/PB
H.SW
EP
SP
NC
CN502
A COMMON 3
A LCH 2
A RCH 4
TO DRUM ASSY
TO VIDEO BLOCK SP/LP
TO CANAL BLOCK REC A
SUPPLY & VREF
LREF
MUTE
DOC
I²C
SDA SCL
LEVEL DETECT
BPF
HF LIMITER
HF AGC
PLL
1.3MHz 1.4MHz CCO
CCO 1.7MHz 1.8MHz
PLL
S & H
S & H
AUDIO CLIPPER
AUDIO CLIPPER
HF LPF
HF LPF
RAF
BPF
HF LIMITER
LEVEL DETECT
NOISE REDUCTION
AUDIO LPF
RAF+IPAF
AFO MUTE
DC SEL
HP SEL
VOLUME HP
DEC SEL
OUT SEL
OUT SEL
LINE SEL
AFO MUTE
RFCMUTE
:AUDIO PB
:AUDIO REC
CN701
18 RF A
TO CANAL BLOCK
NOMUTE
VOLUME L
VOLUME R
NORMAL SEL
INPUT SEL
AGCN
AUDIO LPF
NOISE REDUCTION
RN + IPN
PB EQ
RN
PBSET
PB EQ
RN+IPN
LP
IC703
IC BA7755A
REC/PB SW
L707 BIAS
Q702 SW
CN701
A-LEVEL 20
A HEAD REC 3
A-E HEAD 5
A HEAD PB 2
N.C 16
TU L 12
TU R 14
TO CANAL BLOCK
AU-DEC-OUT L
AU-DEC-OUT R
AU-21-OUT L
AU-21-OUT R
TO CANL BLOK
AU-IN R
AU-IN L
H-FX3500 ONLY
AU-DEC-IN R
AU-DEC-IN L
AU-21-IN R
AU-21-IN L
AU-JACK-IN R
AU-JACK-IN L
FROM CANL BLOK

BLOCK DIAGRAM – 4 (TUNER SECTION)

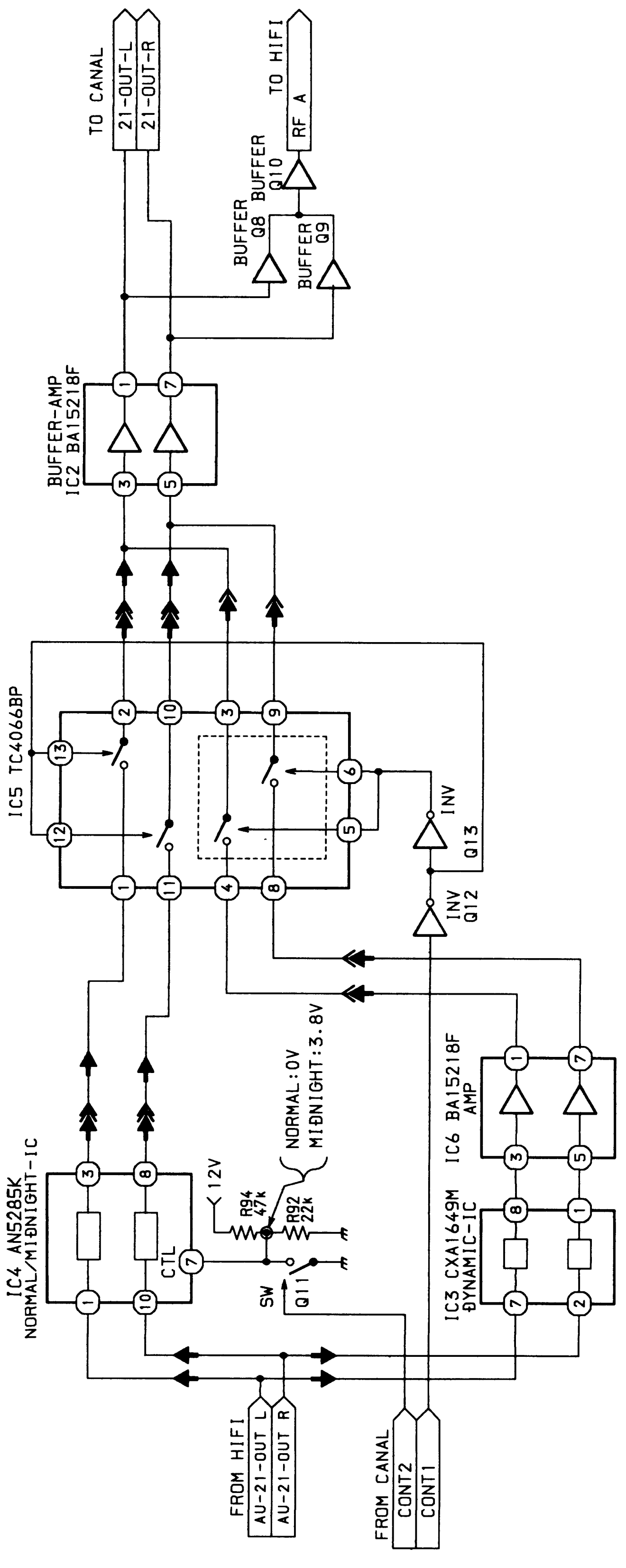

CN801
TO NICAM BLOCK CN451
1 SIF
2 TU GND
3 N.C
4 TU GND
5 N.C
6 TU MUTE
7 TU 5V
8 TU A
9 REG GND
10 IC SDA
11 IC SCK
12 TU GND
CN802
TO ZWEITON BLOCK CN451
1 SIF
2 TU GND
3 TU R
4 TU GND
5 TU L
6 TU 9V
7 TU 5V
8 TU A
9 REG GND
10 IC SDA
11 IC SCK
12 TU GND
TO SS BLOCK
H BAND
AFT DEF
U BAND
AFT CURV
AGC LEVEL
L BAND
IC SDA
IC SCK
TU PWM
TU 5V
REG 5V
TU 9V
EVER 5V
UNREG 70V
REG GND
◀ : AUDIO PB
◁ : VIDEO PB
TO SS BLOCK CN104
⑭
⑬
⑭
REG 5V
TU 9V
EVER 5V
REG GND
A MAIN C.B
TO SS BLOCK CN105 ③
Q811
VIDEO OUTPUT BUFFER
Q807
AFT OUTPUT LEVEL MATCHING
Q808
ACTIVE LOW SW
TU 9V
Q804
AFT OUTPUT BUFFER
TU 9V
TU 9V
TU A (TO SS BLOCK)
TU 9V
Q806
VHF HIGH BAND SW
Q805
UHF BAND SW
TU 9V
TU 9V
DECOUPLE CAP
Q803
AGC OUTPUT LEVEL MATCHING
R852
REGULATOR 32V
Q801
PWM INTEGRATE TO DC
Q813
ACTIVE LOW SW
LPF FILTER
Q802
VHF LOW BAND SW
TU 9V
REG 5V
DECOUPLE CAP
RF A (FROM SS BLOCK CN701 ⑭)
RF V (FROM VIDEO BLOCK)
SW801
RF TEST SIGNAL SW
EVER 5V
DECOUPLE CAP
㉔ VIDEO OUT
㉓ SIF
㉒ AFT OUT
⑳ AUDIO OUT
⑮ HB
⑭ UB
⑬ AFT
⑫ +B
⑩ AGC
⑨ LB
⑧ TU
⑦ MB
⑤ RF A
④ RF V
③ TPSG SW
① BB
TU801
TMUG4-104ABG

BLOCK DIAGRAM – 5 (POWER SECTION)


TO SS BLOCK
UNREG 70V
EVER -25V
EVER 5V
REG 5V
POWER
UNREG 16V
EVER 12V
REG 12V
EVER 9V
AC 3.5V
AC 3.5V
Q608
Q607
R
R
D616
IC601 (1/2) NJM2904L
IC601 (2/2) NJM2904L
③
②
①
⑤
⑥
⑦
Q603, Q609
+5V REG.
Q604
+5V REG.
Q601, Q602
+12V REG.
Q605, Q606
SW
IC602
9V REG.
D613
D609
D610
R616
F602
RECTIFIER
D605~D608
F601
RECTIFIER
D601~D604
R614
A MAIN C.B POWER BLOCK
3
4
5
6
7
8
2
1
⑪
⑫
⑬
⑭
⑮
⑯
⑩
⑰
L POWER-2 C.B
PT641
⑥
⑤
③
②
L641
C641
L642
F641
J641
AC 230V
K POWER-1 C.B

BLOCK DIAGRAM – 6 (THEATER SECTION)

G HIFI/CANAL-1 C.B
THEATRE BLOCK (HV-FX3500Z, ED)


TO CANAL
21-OUT-L
21-OUT-R
TO HIFI
RF A
BUFFER Q8
BUFFER Q10
BUFFER Q9
BUFFER-AMP
IC2 BA15218F
NORMAL or MIDNIGHT / DYNAMIC SELECT-IC
IC5 TC4066BP
INV Q13
INV Q12
IC4 AN5285K
NORMAL/MIDNIGHT-IC
CTL
12V
R94 47k
R92 22k
NORMAL:0V
MIDNIGHT:3.8V
SW Q11
IC3 CXA1649M
DYNAMIC-IC
IC6 BA15218F
AMP
FROM HIFI
AU-21-OUT L
AU-21-OUT R
FROM CANAL
CONT2
CONT1

※ ATTENTION

- DYNAMIC MODE and MIDNIGHT MODE:PLAY BACK only. (HV-FX3500A, ED)
- NORMAL-sound: ⬆ .
- DYNAMIC-sound: ⇞ .
- MIDNIGHT-sound: ⇞ .

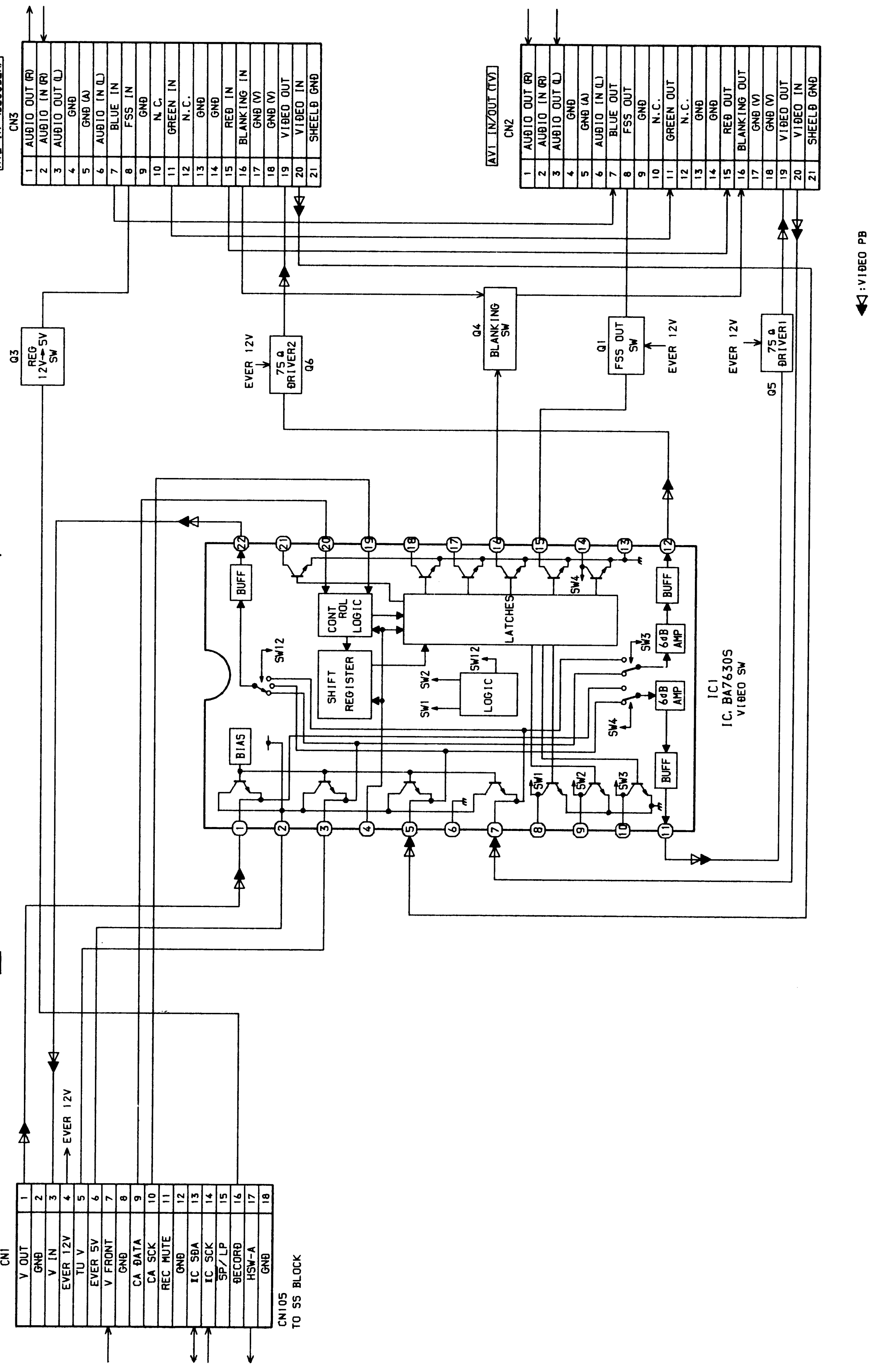
- AU-21-OUT L:from IC701 ㉑ PIN in HIFI block.
- AU-21-OUT R:from IC701 ㉒ PIN in HIFI block.
- CONT1 :from IC1 ⑱ PIN in CANAL block.
- CONT2 :from IC1 ㉑ PIN in CANAL block.
- 21-OUT-L :to CN2 ③ PIN and J1 ⑦ PIN in CANAL block.
- 21-OUT-R :to CN2 ① PIN and J1 ⑦ PIN in CANAL block.
- RF A :to IC702 ① PIN in HIFI block.
- ⟋ :HIGH=ON, LOW=OFF.

	NORMAL	DYNAMIC MODE	MIDNIGHT MODE
CONT1	L	H	L
CONT2	H	L	L

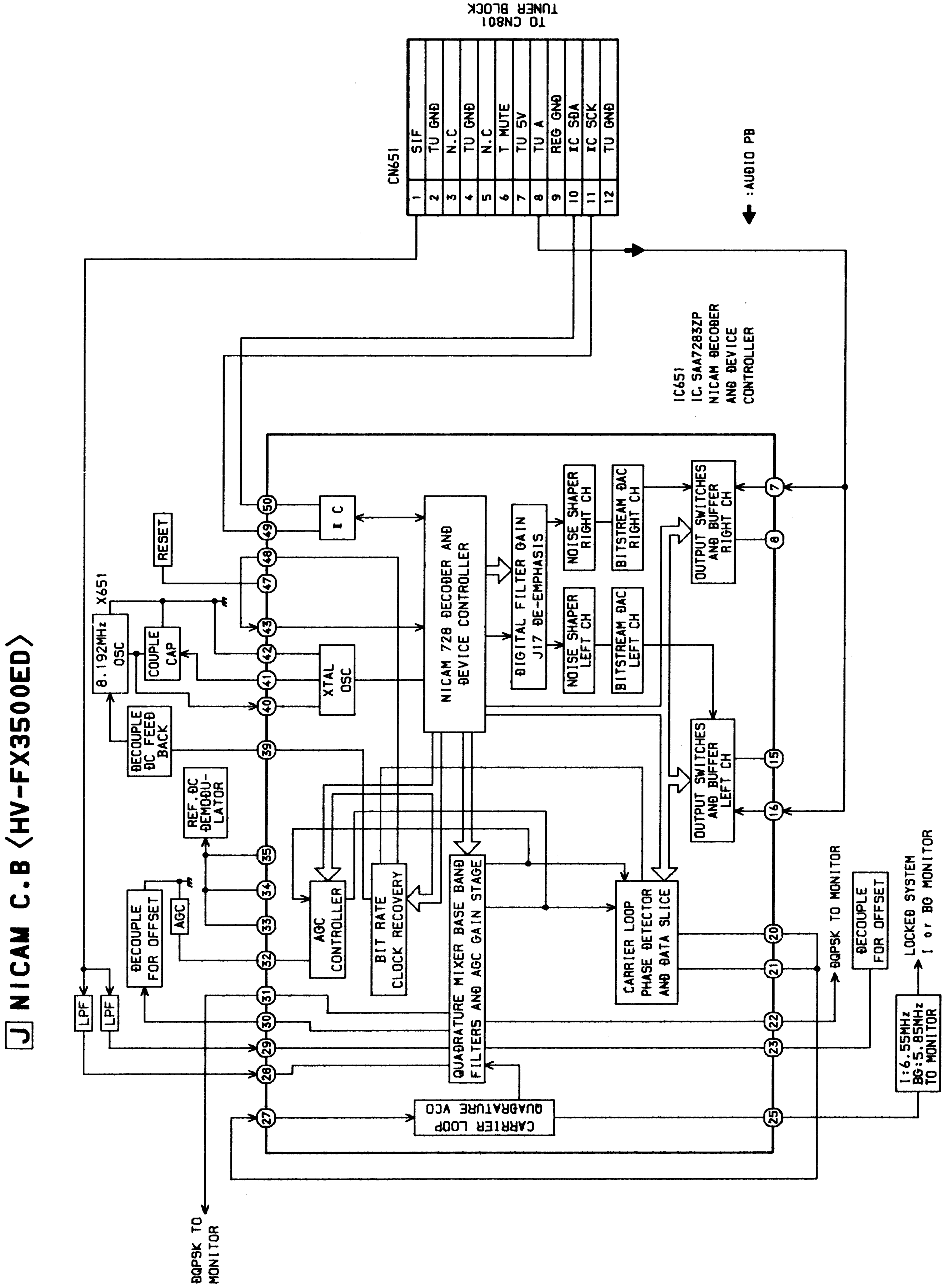
(H:more than 3.5V
L:less than 0.5V)

BLOCK DIAGRAM – 7 (CANAL SECTION)

G HIFI/CANAL-1 C.B <HV-FX3500Z, ED>
H HIFI/CANAL-2 C.B <HV-FX2500Z, EH>


AV2 IN (DECODER)
CN3
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
4 GND
5 GND (A)
6 AUDIO IN (L)
7 BLUE IN
8 FSS IN
9 GND
10 N.C.
11 GREEN IN
12 N.C.
13 GND
14 GND
15 RED IN
16 BLANKING IN
17 GND (V)
18 GND (V)
19 VIDEO OUT
20 VIDEO IN
21 SHEELD GND
AV1 IN/OUT (TV)
CN2
1 AUDIO OUT (R)
2 AUDIO IN (R)
3 AUDIO OUT (L)
4 GND
5 GND (A)
6 AUDIO IN (L)
7 BLUE OUT
8 FSS OUT
9 GND
10 N.C.
11 GREEN OUT
12 N.C.
13 GND
14 GND
15 RED OUT
16 BLANKING OUT
17 GND (V)
18 GND (V)
19 VIDEO OUT
20 VIDEO IN
21 SHEELD GND
◁:VIDEO PB
Q3 REG 12V→5V SW
EVER 12V
75 Ω DRIVER2 Q6
Q4 BLANKING SW
Q1 FSS OUT SW
EVER 12V
EVER 12V
75 Ω DRIVER1 Q5
BUFF
CONT ROL LOGIC
LATCHES
SW4
BUFF
6dB AMP
SW3
SW12
SHIFT REGISTER
SW1 SW2
SW12
LOGIC
6dB AMP
SW4
BIAS
SW1
SW2
SW3
BUFF
IC1
IC BA7630S
VIDEO SW
EVER 12V
CN1
1 V OUT
2 GND
3 V IN
4 EVER 12V
5 TU V
6 EVER 5V
7 V FRONT
8 GND
9 CA DATA
10 CA SCK
11 REC MUTE
12 GND
13 IC SDA
14 IC SCK
15 SP/LP
16 DECORD
17 HSW-A
18 GND
CN105
TO SS BLOCK

BLOCK DIAGRAM – 8 (NICAM SECTION)


J NICAM C.B 〈HV-FX3500ED〉
TO CN801 TUNER BLOCK
CN651
1 SIF
2 TU GND
3 N.C
4 TU GND
5 N.C
6 T MUTE
7 TU 5V
8 TU A
9 REG GND
10 I²C SDA
11 I²C SCK
12 TU GND
:AUDIO PB
IC651 IC SAA7283ZP NICAM DECODER AND DEVICE CONTROLLER
RESET
X651
8.192MHz OSC
COUPLE CAP
DECOUPLE DC FEED BACK
REF. DC DEMODULATOR
DECOUPLE FOR OFFSET
AGC
LPF
LPF
I²C
XTAL OSC
NICAM 728 DECODER AND DEVICE CONTROLLER
DIGITAL FILTER GAIN J17 DE-EMPHASIS
NOISE SHAPER RIGHT CH
NOISE SHAPER LEFT CH
BITSTREAM DAC RIGHT CH
BITSTREAM DAC LEFT CH
OUTPUT SWITCHES AND BUFFER RIGHT CH
OUTPUT SWITCHES AND BUFFER LEFT CH
AGC CONTROLLER
BIT RATE CLOCK RECOVERY
QUADRATURE MIXER BASE BAND FILTERS AND AGC GAIN STAGE
CARRIER LOOP PHASE DETECTOR AND DATA SLICE
CARRIER LOOP QUADRATURE VCO
DQPSK TO MONITOR
DECOUPLE FOR OFFSET
LOCKED SYSTEM I or BG MONITOR
I:6.55MHz BG:5.85MHz TO MONITOR
DQPSK TO MONITOR
7
8
15
16
20
21
22
23
25
27
28
29
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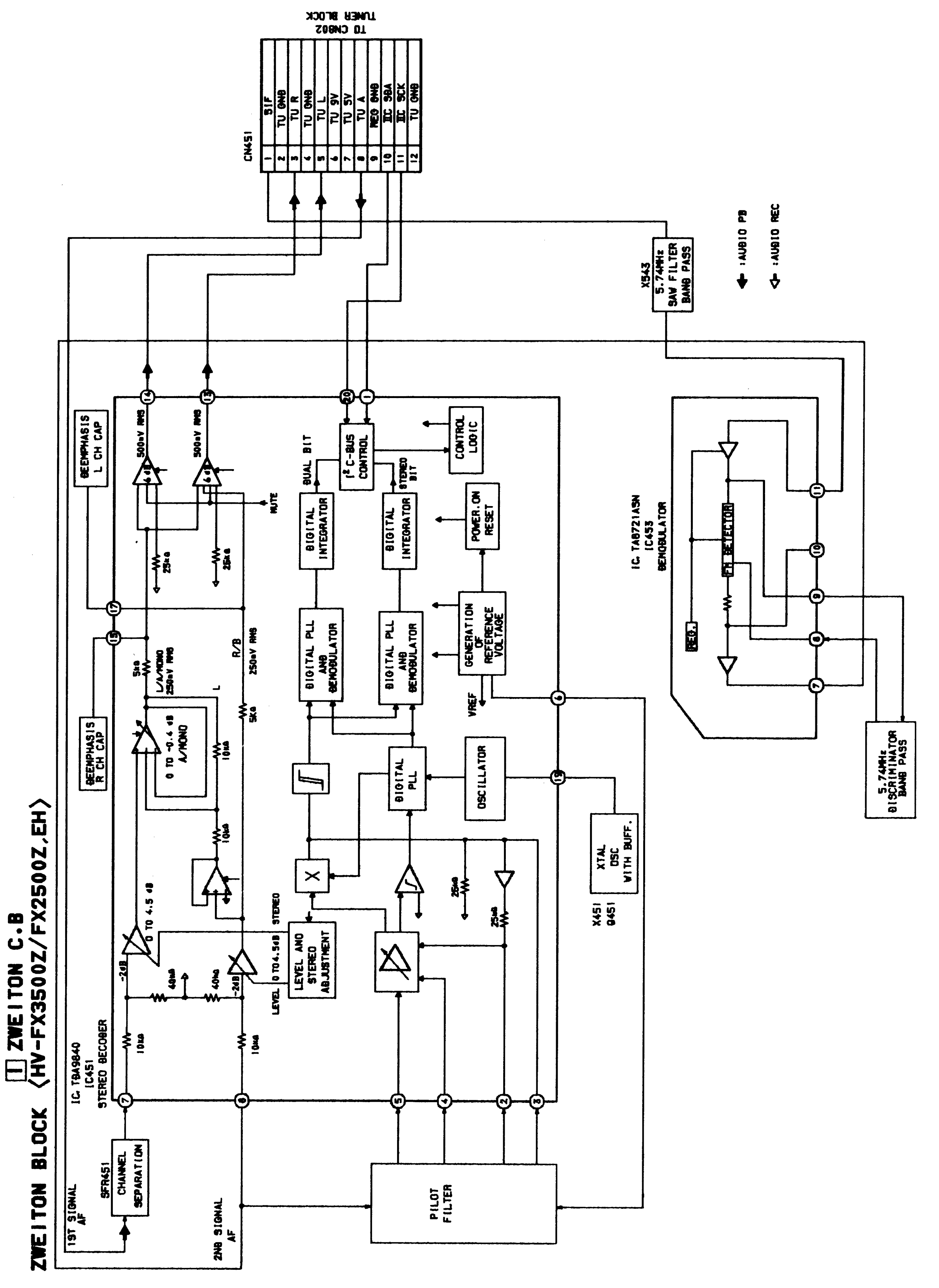
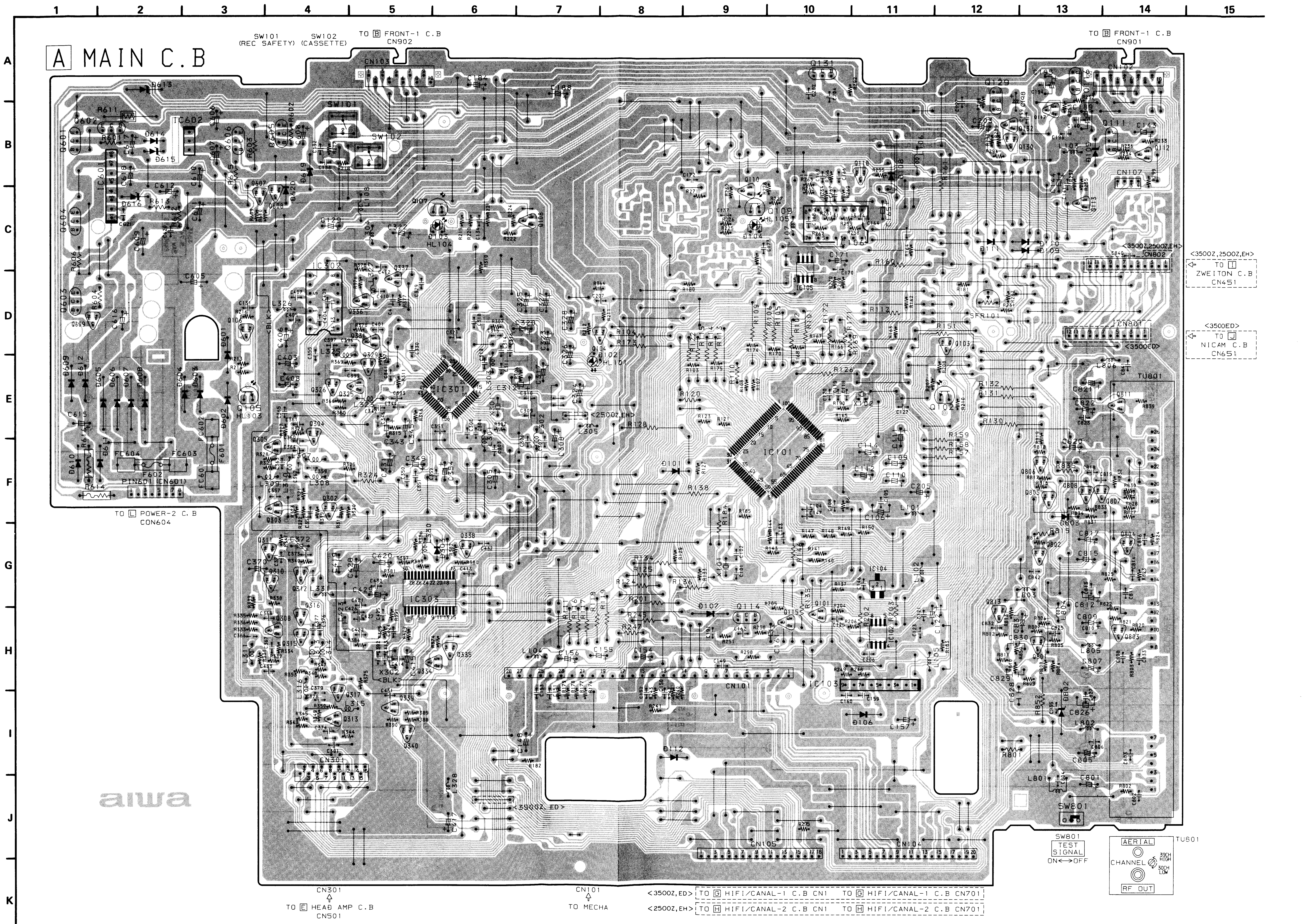
50

BLOCK DIAGRAM – 9 (ZWEITON SECTION)

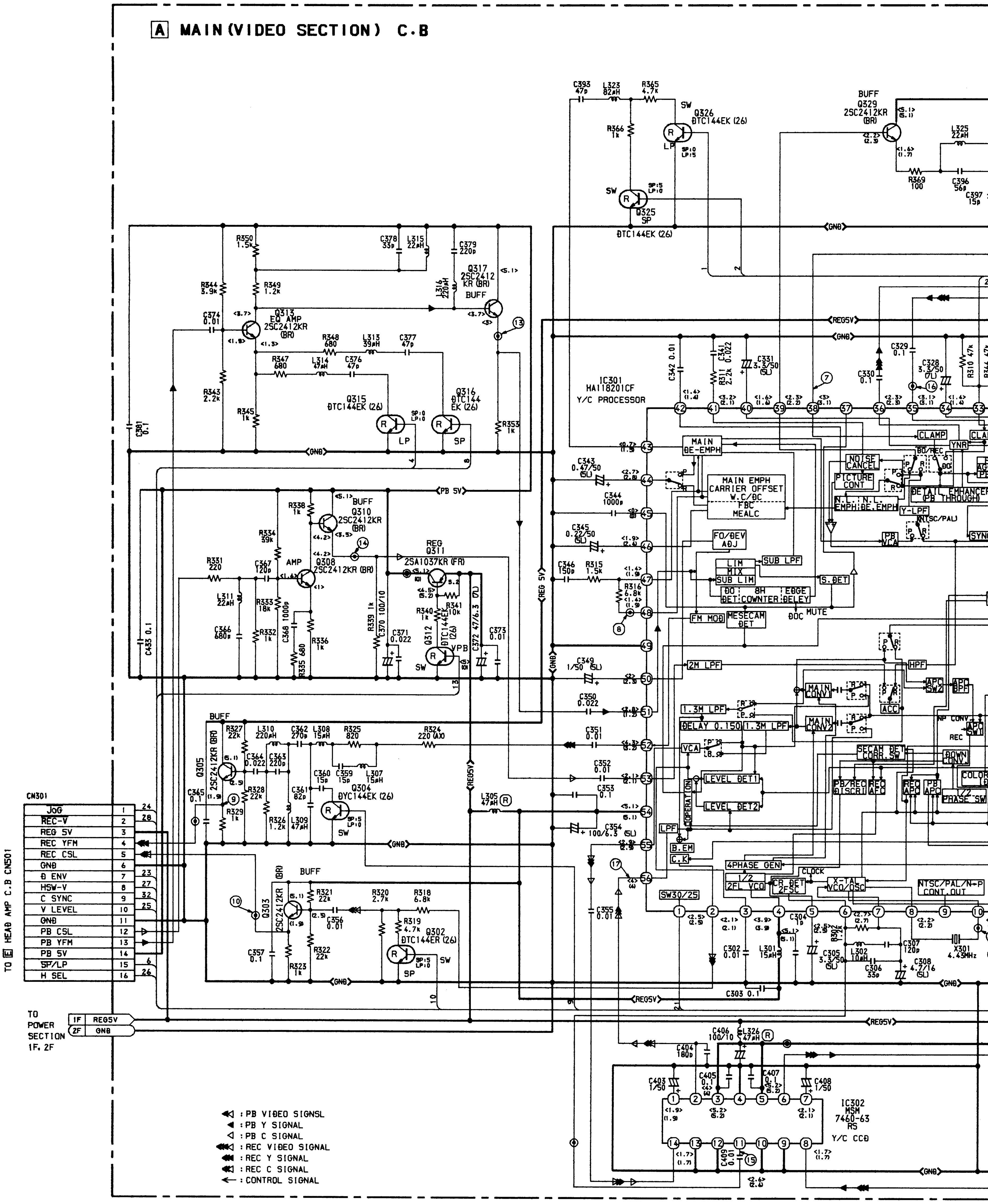

I ZWEITON C.B
ZWEITON BLOCK 〈HV-FX3500Z/FX2500Z,EH〉
TO CN802 TUNER BLOCK
CN451
1 SIF
2 TU GND
3 TU R
4 TU GND
5 TU L
6 TU 9V
7 TU 5V
8 TU A
9 REG GND
10 I²C SDA
11 I²C SCK
12 TU GND
:AUDIO PB
:AUDIO REC
X543 5.74MHz SAW FILTER BAND PASS
IC TA8721ASN IC453 DEMODULATOR
FM DETECTOR
REG.
5.74MHz DISCRIMINATOR BAND PASS
IC TDA9840 IC451 STEREO DECODER
DEEMPHASIS L CH CAP
DEEMPHASIS R CH CAP
500mV RMS
MUTE
DUAL BIT
I²C-BUS CONTROL
STEREO BIT
CONTROL LOGIC
DIGITAL INTEGRATOR
DIGITAL INTEGRATOR
POWER ON RESET
DIGITAL PLL AND DEMODULATOR
DIGITAL PLL AND DEMODULATOR
GENERATION OF REFERENCE VOLTAGE
VREF
L/MONO 250mV RMS
R/B 250mV RMS
0 TO -0.4 dB A/MONO
0 TO 4.5 dB
0 TO 4.5 dB
STEREO
LEVEL
LEVEL AND STEREO ADJUSTMENT
DIGITAL PLL
OSCILLATOR
XTAL OSC WITH BUFF.
X451 Q451
SFR451 CHANNEL SEPARATION
1ST SIGNAL AF
2ND SIGNAL AF
PILOT FILTER

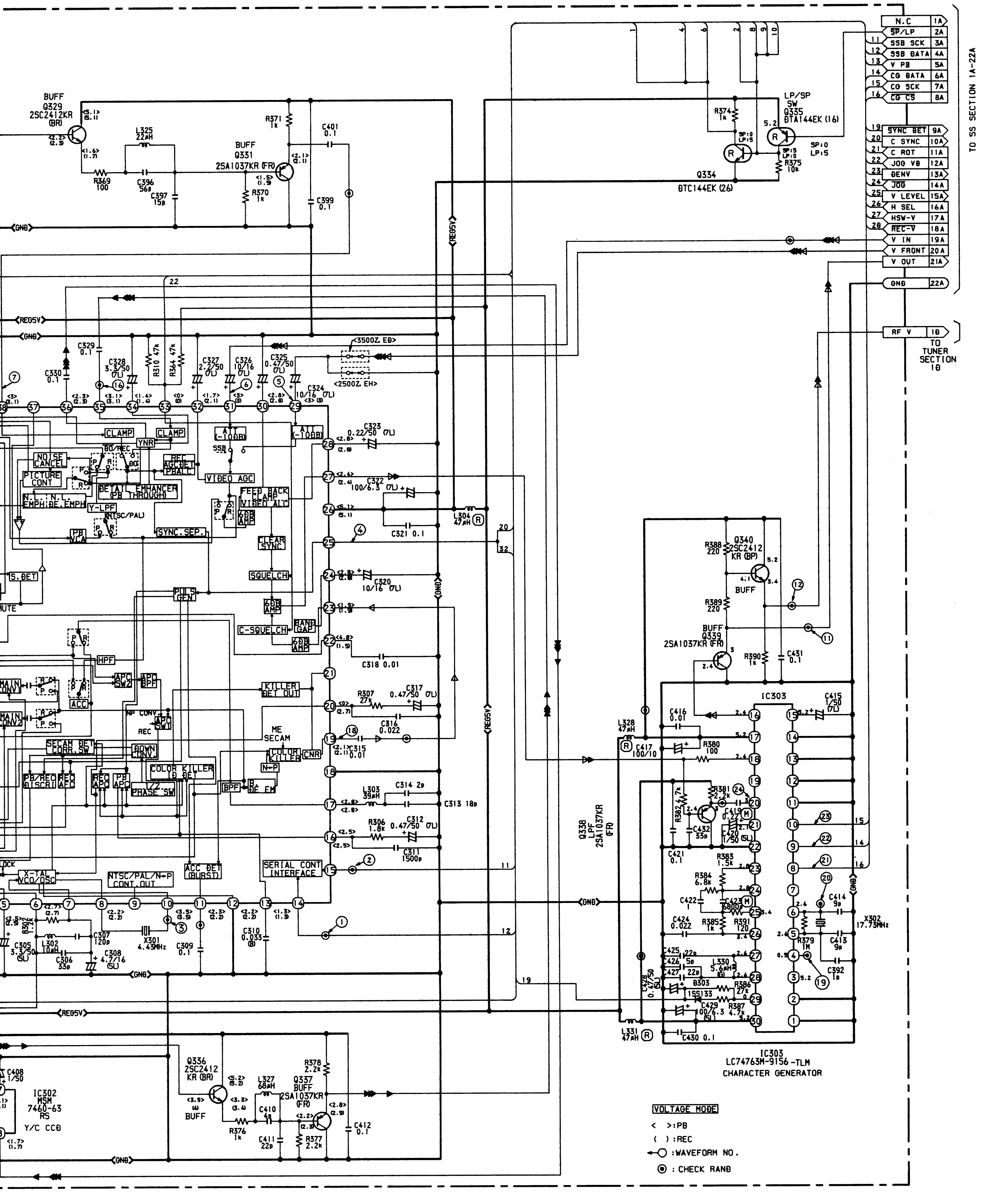
WIRING – 1 (MAIN SECTION)



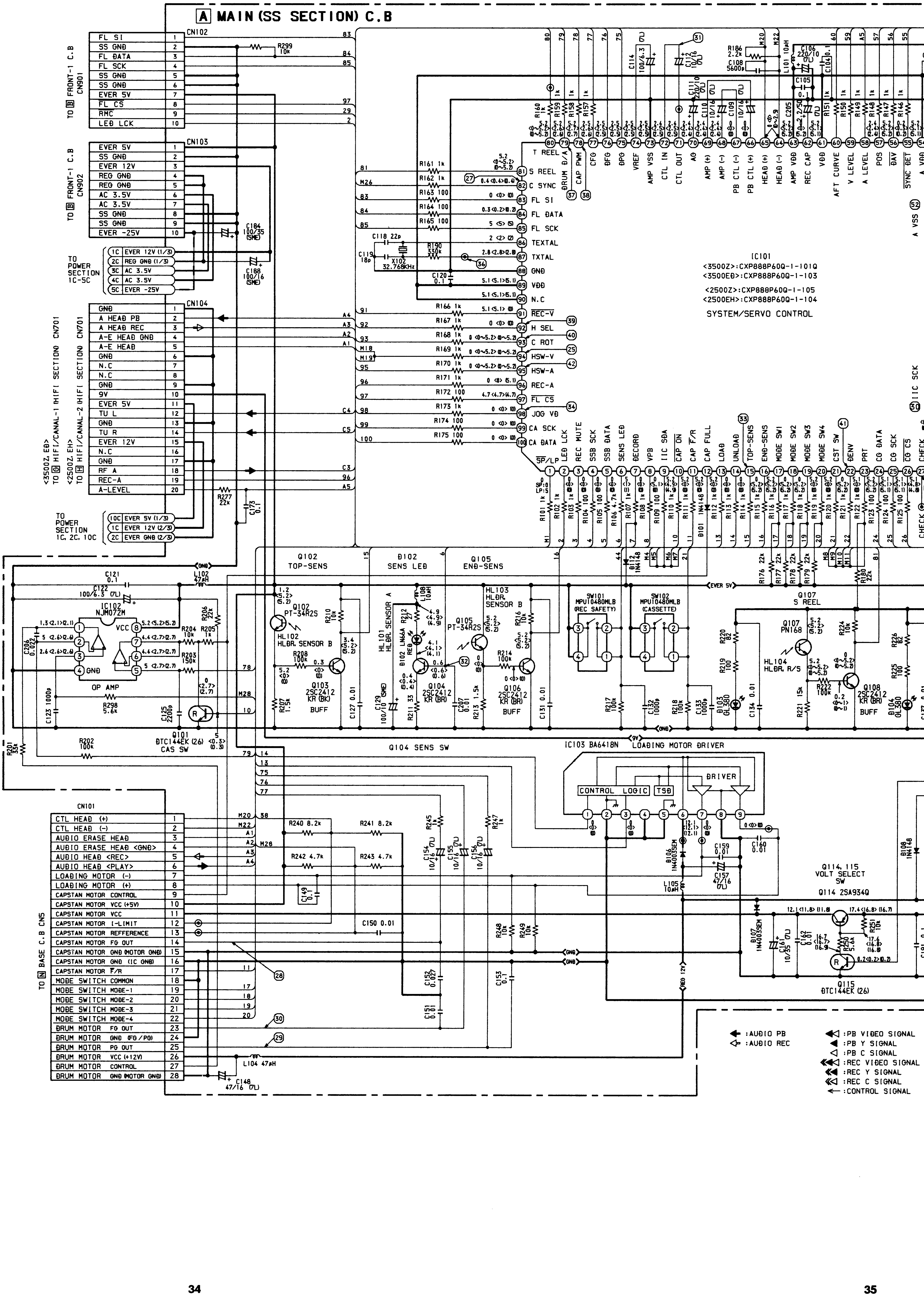
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
A MAIN C.B
SW101 (REC SAFETY)
SW102 (CASSETTE)
TO B FRONT-1 C.B CN902
TO B FRONT-1 C.B CN901
CN103
CN102
CN107
CN802
CN801
<3500Z,2500Z,EH>
<3500Z,2500Z,EH> TO I ZWEITON C.B CN451
<3500ED>
<3500ED> TO J NICAM C.B CN651
TU801
IC101
IC301
IC302
IC303
IC601
IC602
IC102
IC103
IC104
IC105
CN101
CN104
CN105
CN301
<2500Z,EH>
<3500Z,ED>
TO L POWER-2 C.B CON604
PIN601 (CN601)
SW801
SW801 TEST SIGNAL ON←→OFF
TU601
AERIAL
CHANNEL
39CH HIGH
30CH LOW
RF OUT
CN301 TO E HEAD AMP C.B CN501
CN101 TO MECHA
<3500Z,ED> TO G HIFI/CANAL-1 C.B CN1 TO G HIFI/CANAL-1 C.B CN701
<2500Z,EH> TO H HIFI/CANAL-2 C.B CN1 TO H HIFI/CANAL-2 C.B CN701
aiwa

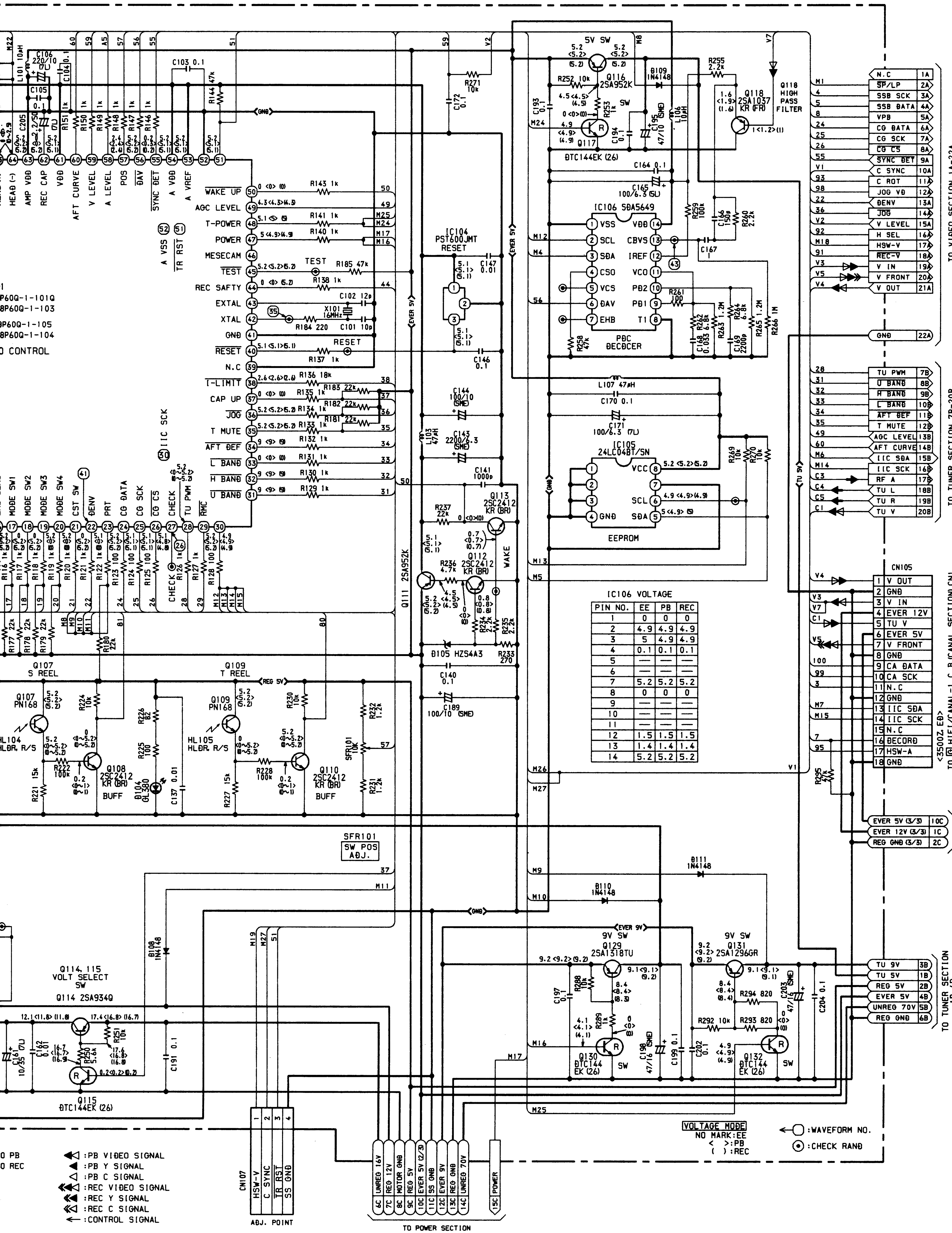
SCHEMATIC DIAGRAM – 1 (VIDEO SECTION)


A MAIN (VIDEO SECTION) C.B
IC301 HA118201CF Y/C PROCESSOR
IC302 MSM 7460-63 RS Y/C CCD
Q313 EQ AMP 2SC2412KR (BR)
Q317 2SC2412 KR (BR) BUFF
Q315 DTC144EK (26)
Q316 DTC144 EK (26)
Q310 BUFF 2SC2412KR (BR)
Q308 AMP 2SC2412KR (BR)
Q311 REG 2SA1037KR (FR)
Q312 DTC144EK (26)
Q305 BUFF 2SC2412KR (BR)
Q304 DTC144EK (26)
Q303 BUFF 2SC2412KR (BR)
Q302 DTC144ER (26)
Q326 SW DTC144EK (26)
Q325 SW SP DTC144EK (26)
Q329 BUFF 2SC2412KR (BR)
MAIN DE-EMPH
MAIN EMPH CARRIER OFFSET W.C/DC FBC MEALC
FO/DEV ADJ
LIM MIX SUB LIM
SUB LPF
DO DET
8H COWNTER
EDGE DELEY
S.DET
FM MOD
MESECAM DET
2M LPF
1.3M LPF
DELAY 0.150
VCA
LEVEL DET1
LEVEL DET2
OPERATION
LPF
B.EM
C.K
4PHASE GEN
1/2 2FL VCO
CR DET 2FSC
CLOCK
X-TAL VCO/OSC
SW30/25
NTSC/PAL/N-P CONT.OUT
CLAMP
YNR
NOISE CANCEL
PICTURE CONT
N.L. EMPH
N.L. DE.EMPH
DETAIL ENHANCER (PB THROUGH)
Y-LPF
NTSC/PAL
PB VCA
HPF
MAIN CONV1
MAIN CONV2
ACC
APC SW2
BPF
SECAM DET CORR.SW
PB/REC DISCRI
REC APC
PB APC
AFC
DOWN CNV
COLOR
1/2 PHASE SW
X301 4.43MHz
CN301
1 JOG
2 REC-V
3 REG 5V
4 REC YFM
5 REC CSL
6 GND
7 D ENV
8 HSW-V
9 C SYNC
10 V LEVEL
11 GND
12 PB CSL
13 PB YFM
14 PB 5V
15 SP/LP
16 H SEL
TO E HEAD AMP C.B CN501
TO POWER SECTION 1F, 2F
1F REG5V
2F GND
(REG5V)
(PB 5V)
(GND)
◄◄ : PB VIDEO SIGNSL
◄ : PB Y SIGNAL
◁ : PB C SIGNAL
◄◄ : REC VIDEO SIGNAL
◄ : REC Y SIGNAL
◄ : REC C SIGNAL
← : CONTROL SIGNAL


BUFF
Q329
2SC2412KR
(BR)
L325
22μH
R369
100
C396
56p
C397
15p
R371
1k
C401
0.1
BUFF
Q331
2SA1037KR (FR)
R370
1k
C399
0.1
<GND>
<REG5V>
22
C329
0.1
C330
0.1
C328
3.3/50
(7L)
R310 47k
R364 47k
C327
2.2/50
(7L)
C326
10/16
(7L)
C325
0.47/50
(7L)
C324
10/16 (7L)
<3500Z EB>
<2500Z EH>
C323
0.22/50 (7L)
C322
100/6.3 (7L)
L304
47μH
C321 0.1
C320
10/16 (7L)
C318 0.01
R307
27k
C317
0.47/50 (7L)
C316
0.022
C315
0.01
L303
39μH
C314 2p
C313 18p
R306
1.8k
C312
0.47/50 (7L)
C311
1500p
CLAMP
YNR
CLAMP
NOISE CANCEL
PICTURE CONT
REC AGC DET PBALC
DETAIL ENHANCER (PB THROUGH)
N.L. EMPH
N.L. DE. EMPH
Y-LPF
NTSC/PAL
PB VCA
SYNC. SEP.
ATT (-10DB)
ATT (-10DB)
SSB
VIDEO AGC
FEED BACK CLAMP
VIDEO ALC
6DB AMP
CLEAR SYNC
SQUELCH
6DB AMP
C-SQUELCH
BAND GAP
6DB AMP
S. DET
MUTE
PULS GEN
HPF
MAIN CONV1
MAIN CONV2
ACC
APC SW2
APC BPF
KILLER DET OUT
NP CONV
REC
APC SW1
SECAM DET CORR. SW
DOWN CONV
ME SECAM
COLOR KILLER
CNR
N-P
COLOR KILLER ID DET
PB/REC DISCRI
REC AFC
REC APC
PB APC
1/2 PHASE SW
BPF
DE EM
LOCK
X-TAL VCO/OSC
NTSC/PAL/N-P CONT OUT
ACC DET (BURST)
SERIAL CONT INTERFACE
C302
L302
10μH
C305
3.3/50
(5L)
C306
33p
C307
120p
C308
4.7/16
(5L)
X301
4.43MHz
C309
0.1
C310
0.033
11
12
19
20
32
<REG5V>
<GND>
LP/SP
SW
Q335
DTA144EK (16)
R374
1k
SP:0
LP:5
R375
10k
Q334
DTC144EK (26)
SP:0
LP:5
Q340
2SC2412
KR (BP)
R388
220
BUFF
R389
220
BUFF
Q339
2SA1037KR (FR)
R390
1k
C431
0.1
L328
47μH
C416
0.01
C417
100/10
R380
100
C415
1/50
(7L)
IC303
R381
R382 4.7k
C419
C420
1/50 (5L)
C432
33p
C421
0.1
R383
1.5k
R384
6.8k
C422
1
C423
C424
0.022
R385
1k
R391
120
C425 22p
C426 5p
C427 22p
L330
5.6μH
D303
1SS133
R386
27k
C429
100/6.3
(5L)
R387
4.7k
C428
0.47/50
L331
47μH
C430 0.1
C414
9p
X302
17.73MHz
R379
1M
C413
9p
C392
1p
Q338
LPF
2SA1037KR
(FR)
IC303
LC74763M-9156-TLM
CHARACTER GENERATOR
N.C 1A
SP/LP 2A
SSB SCK 3A
SSB DATA 4A
V PB 5A
CG DATA 6A
CG SCK 7A
CG CS 8A
SYNC DET 9A
C SYNC 10A
C ROT 11A
JOG VD 12A
DENV 13A
JOG 14A
V LEVEL 15A
H SEL 16A
HSW-V 17A
REC-V 18A
V IN 19A
V FRONT 20A
V OUT 21A
GND 22A
TO SS SECTION 1A-22A
RF V 1B
TO TUNER SECTION 1B
Q336
2SC2412
KR (BR)
BUFF
L327
68μH
Q337
BUFF
2SA1037KR
(FR)
R378
2.2k
C410
4p
R376
1k
C411
22p
R377
2.2k
C412
0.1
C408
1/50
IC302
MSM
7460-63
RS
Y/C CCD
VOLTAGE MODE
< >:PB
( ):REC
:WAVEFORM NO.
◉ : CHECK LAND

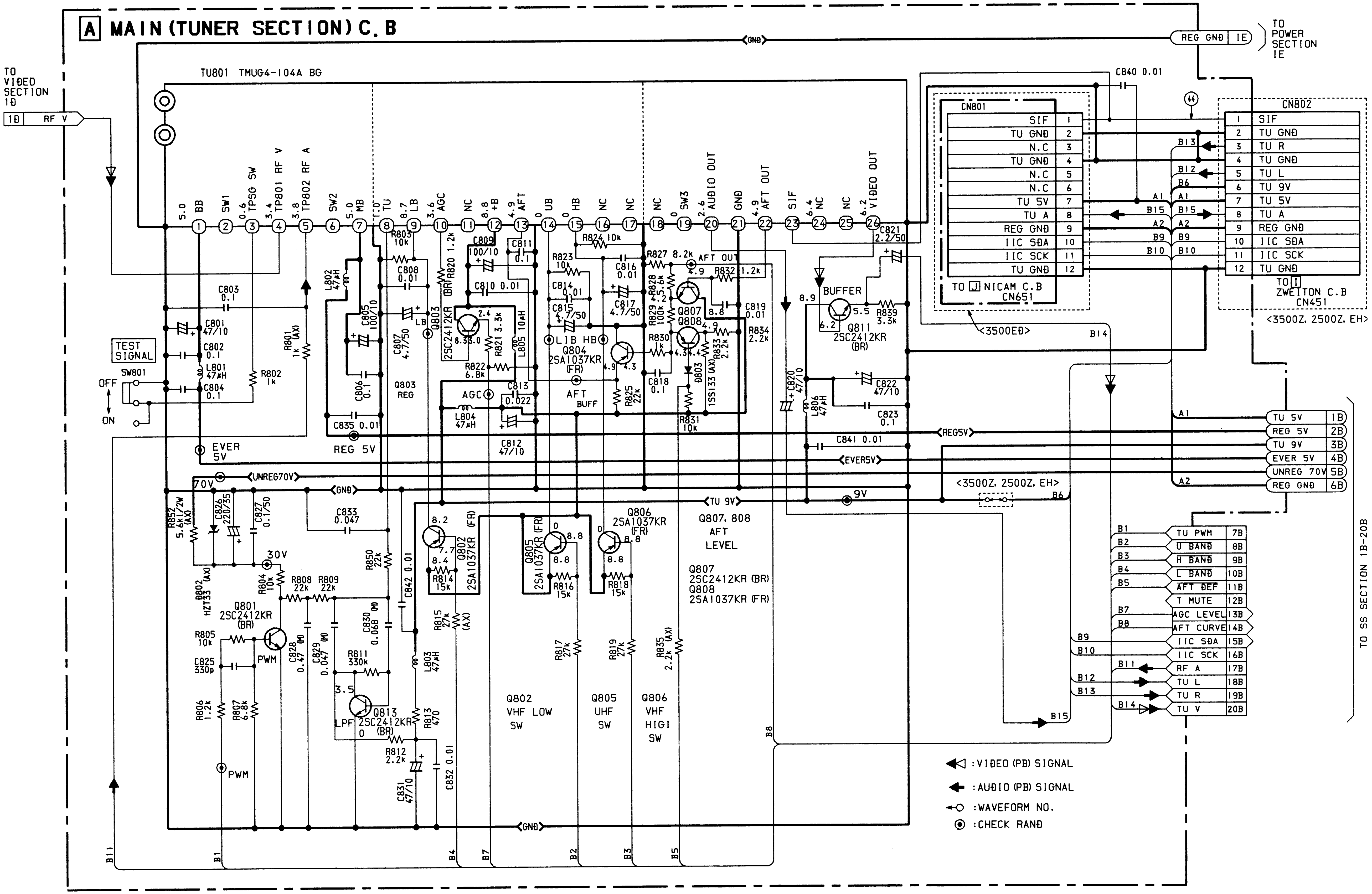
SCHEMATIC DIAGRAM – 2 (SYSTEM CONTROL／SERVO SECTION)


A MAIN (SS SECTION) C.B
TO B FRONT-1 C.B CN901
TO B FRONT-1 C.B CN902
TO POWER SECTION 1C-5C
<3500Z ED> TO G HIFI/CANAL-1 HIFI SECTION CN701
<2500Z EH> TO H HIFI/CANAL-2 HIFI SECTION CN701
TO POWER SECTION 1C, 2C, 10C
TO N BASE C.B CN5
CN101
CN102
CN103
CN104
IC101
<3500Z>:CXP888P60Q-1-101Q
<3500ED>:CXP888P60Q-1-103
<2500Z>:CXP888P60Q-1-105
<2500EH>:CXP888P60Q-1-104
SYSTEM/SERVO CONTROL
IC102 NJM072M
OP AMP
Q101 DTC144EK (26) CAS SW
Q102 TOP-SENS
D102 SENS LED
Q105 END-SENS
Q104 SENS SW
IC103 BA6418N LOADING MOTOR DRIVER
CONTROL LOGIC
TSD
DRIVER
SW101 MPU10480MLB (REC SAFETY)
SW102 MPU10480MLB (CASSETTE)
Q107 S REEL
Q108 BUFF
HL104 HLDR, R/S
Q114, 115 VOLT SELECT SW
Q114 2SA934Q
Q115 DTC144EK (26)
X102 32.768KHz
←:AUDIO PB
⇦:AUDIO REC
◀◁:PB VIDEO SIGNAL
◀:PB Y SIGNAL
◁:PB C SIGNAL
◀◀◁:REC VIDEO SIGNAL
◀◀:REC Y SIGNAL
◀◁:REC C SIGNAL
←:CONTROL SIGNAL

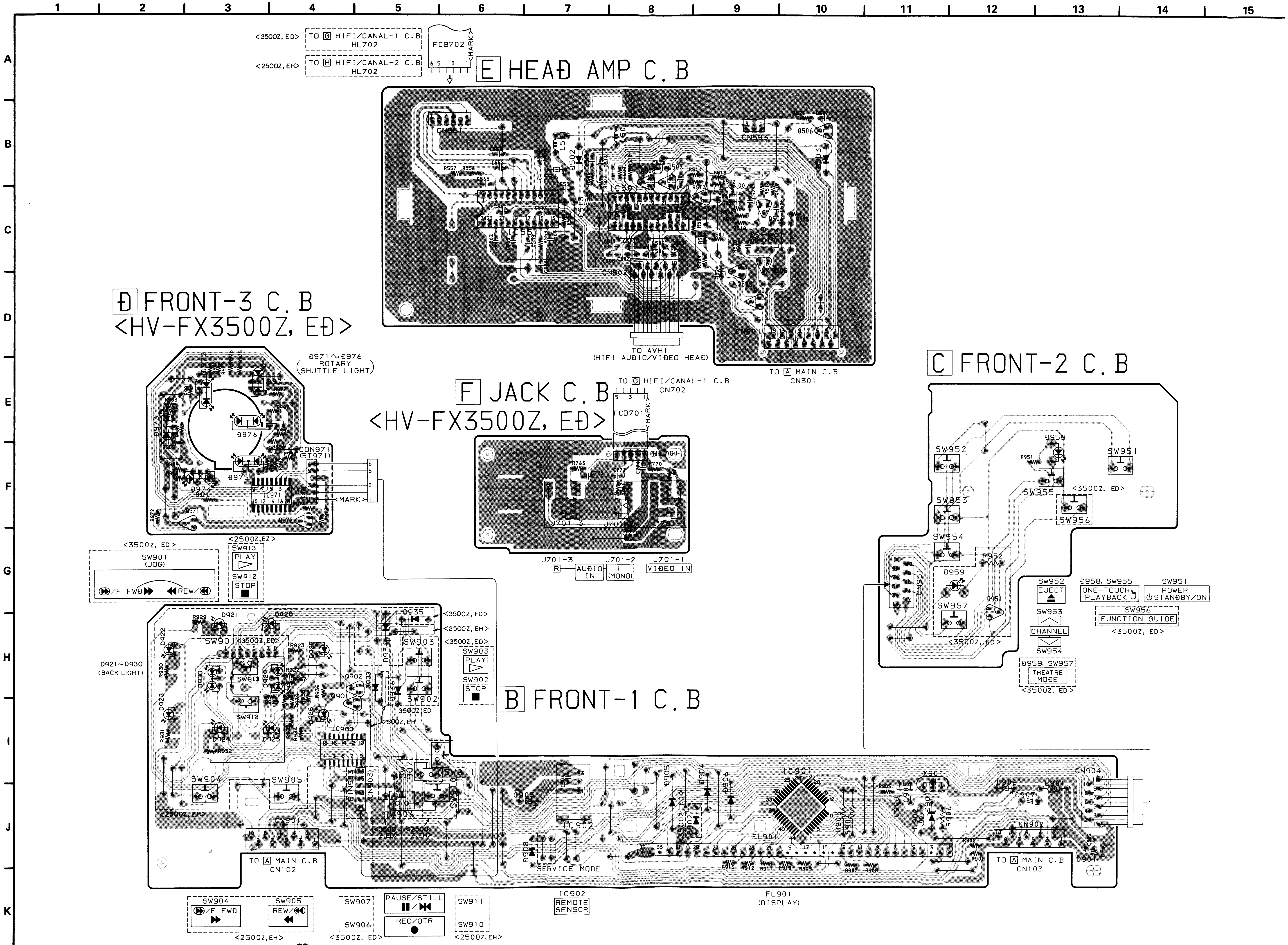

5V SW
Q116 2SA952K
Q117 DTC144EK (26)
D109 1N4148
R255 2.2k
Q118 2SA1037 KR (FR)
Q118 HIGH PASS FILTER
IC106 SDA5649
VSS
VDD
SCL
CBVS
SDA
IREF
CSO
VCO
VCS
PD2
DAV
PD1
EHD
T1
PDC DECODER
IC104 PST600JMT RESET
L107 47μH
C170 0.1
C171 100/6.3 (7U)
IC105 24LC04BT/SN
VCC
SCL
SDA
GND
EEPROM
WAKE UP
AGC LEVEL
T-POWER
POWER
MESECAM
TEST
REC SAFTY
EXTAL
XTAL
GND
RESET
N.C
T-LIMIT
CAP UP
JOG
T MUTE
AFT DEF
L BAND
H BAND
U BAND
X101 16MHz
Q113 2SC2412 KR (BR)
Q112 2SC2412 KR (BR)
Q111 2SA952K
WAKE
D105 HZS4A3
Q107 S REEL
Q107 PN168
HL104 HLDR. R/S
Q108 2SC2412 KR (BR) BUFF
Q109 T REEL
Q109 PN168
HL105 HLDR. R/S
Q110 2SC2412 KR (BR) BUFF
SFR101 SW POS ADJ.
D104 GL380
D111 1N4148
D110 1N4148
D108 1N4148
Q114, 115 VOLT SELECT SW
Q114 2SA934Q
Q115 DTC144EK (26)
9V SW
Q129 2SA1318TU
9V SW
Q131 2SA1296GR
Q130 DTC144 EK (26) SW
Q132 DTC144 EK (26) SW
N.C 1A
SP/LP 2A
SSB SCK 3A
SSB DATA 4A
VPB 5A
CG DATA 6A
CG SCK 7A
CG CS 8A
SYNC DET 9A
C SYNC 10A
C ROT 11A
JOG VD 12A
DENV 13A
JOG 14A
V LEVEL 15A
H SEL 16A
HSW-V 17A
REC-V 18A
V IN 19A
V FRONT 20A
V OUT 21A
GND 22A
TO VIDEO SECTION 1A-22A
TU PWM 7B
U BAND 8B
H BAND 9B
L BAND 10B
AFT DEF 11B
T MUTE 12B
AGC LEVEL 13B
AFT CURVE 14B
IIC SDA 15B
IIC SCK 16B
RF A 17B
TU L 18B
TU R 19B
TU V 20B
TO TUNER SECTION 7B-20B
CN105
1 V OUT
2 GND
3 V IN
4 EVER 12V
5 TU V
6 EVER 5V
7 V FRONT
8 GND
9 CA DATA
10 CA SCK
11 N.C
12 GND
13 IIC SDA
14 IIC SCK
15 N.C
16 DECODE
17 HSW-A
18 GND
<3500Z ED> TO D HIFI/CANAL-1 C.B (CANAL SECTION) CN1
<2500Z EH> TO H HIFI/CANAL-2 C.B (CANAL SECTION) CN1
EVER 5V (3/3) 10C
EVER 12V (3/3) 1C
REG GND (3/3) 2C
TO POWER SECTION 1C, 2C 10C
TU 9V 3B
TU 5V 1B
REG 5V 2B
EVER 5V 4B
UNREG 70V 5B
REG GND 6B
TO TUNER SECTION 1B-6B
CN107
HSW-V
C SYNC
TR RST
SS GND
ADJ. POINT
6C UNREG 16V
7C REG 12V
8C MOTOR GND
9C REG 5V
10C EVER 5V (2/3)
11C SS GND
12C EVER 9V
13C REG GND
14C UNREG 70V
15C POWER
TO POWER SECTION 6C-15C
VOLTAGE MODE
NO MARK: EE
< >: PB
( ): REC
: WAVEFORM NO.
: CHECK RAND
0 PB
0 REC
◀: PB VIDEO SIGNAL
◀: PB Y SIGNAL
◁: PB C SIGNAL
◀◀: REC VIDEO SIGNAL
◀◀: REC Y SIGNAL
◁◁: REC C SIGNAL
←: CONTROL SIGNAL

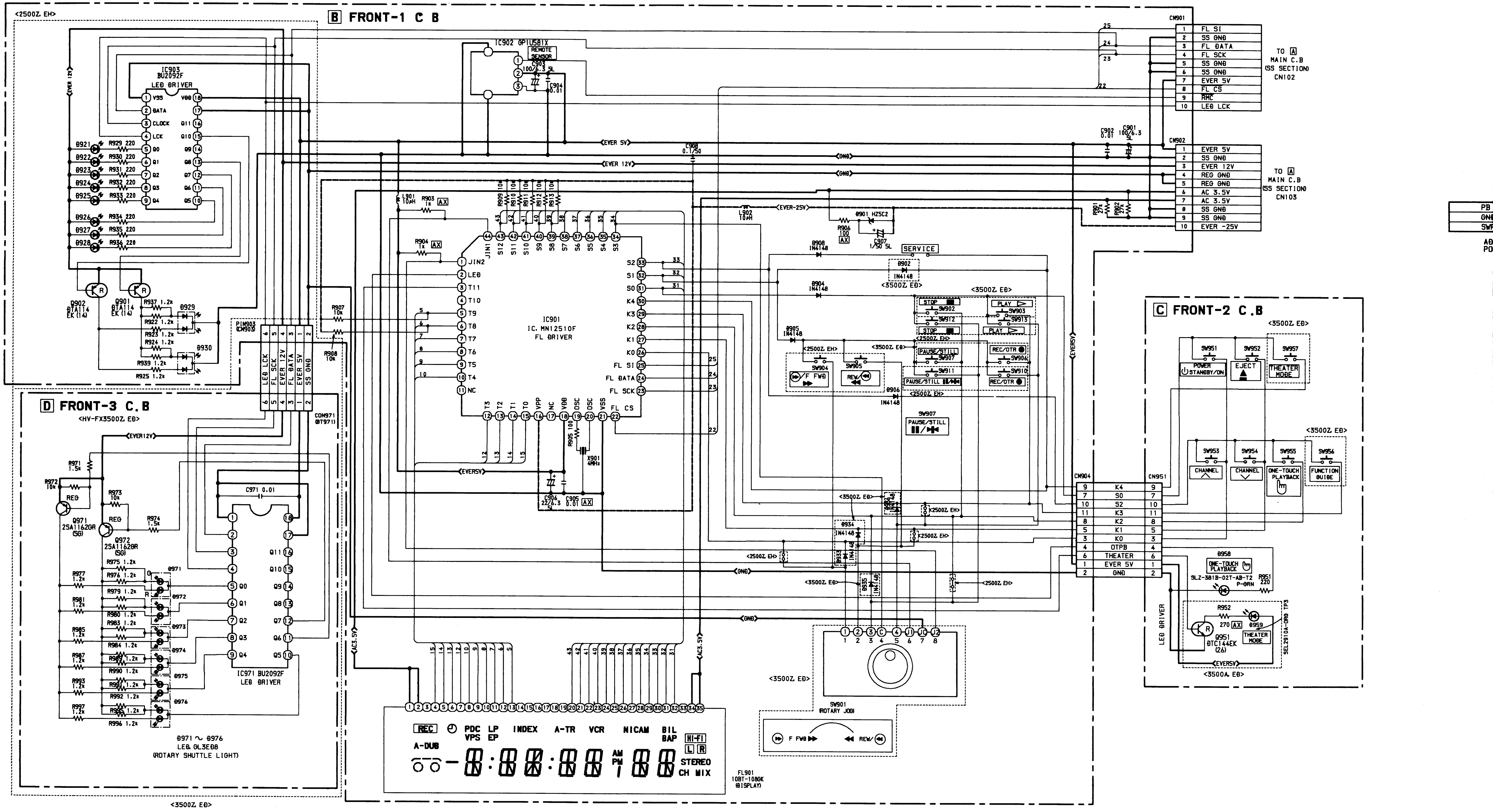
IC106 VOLTAGE

PIN NO.	EE	PB	REC
1	0	0	0
2	4.9	4.9	4.9
3	5	4.9	4.9
4	0.1	0.1	0.1
5	—	—	—
6	—	—	—
7	5.2	5.2	5.2
8	0	0	0
9	—	—	—
10	—	—	—
11	—	—	—
12	1.5	1.5	1.5
13	1.4	1.4	1.4
14	5.2	5.2	5.2

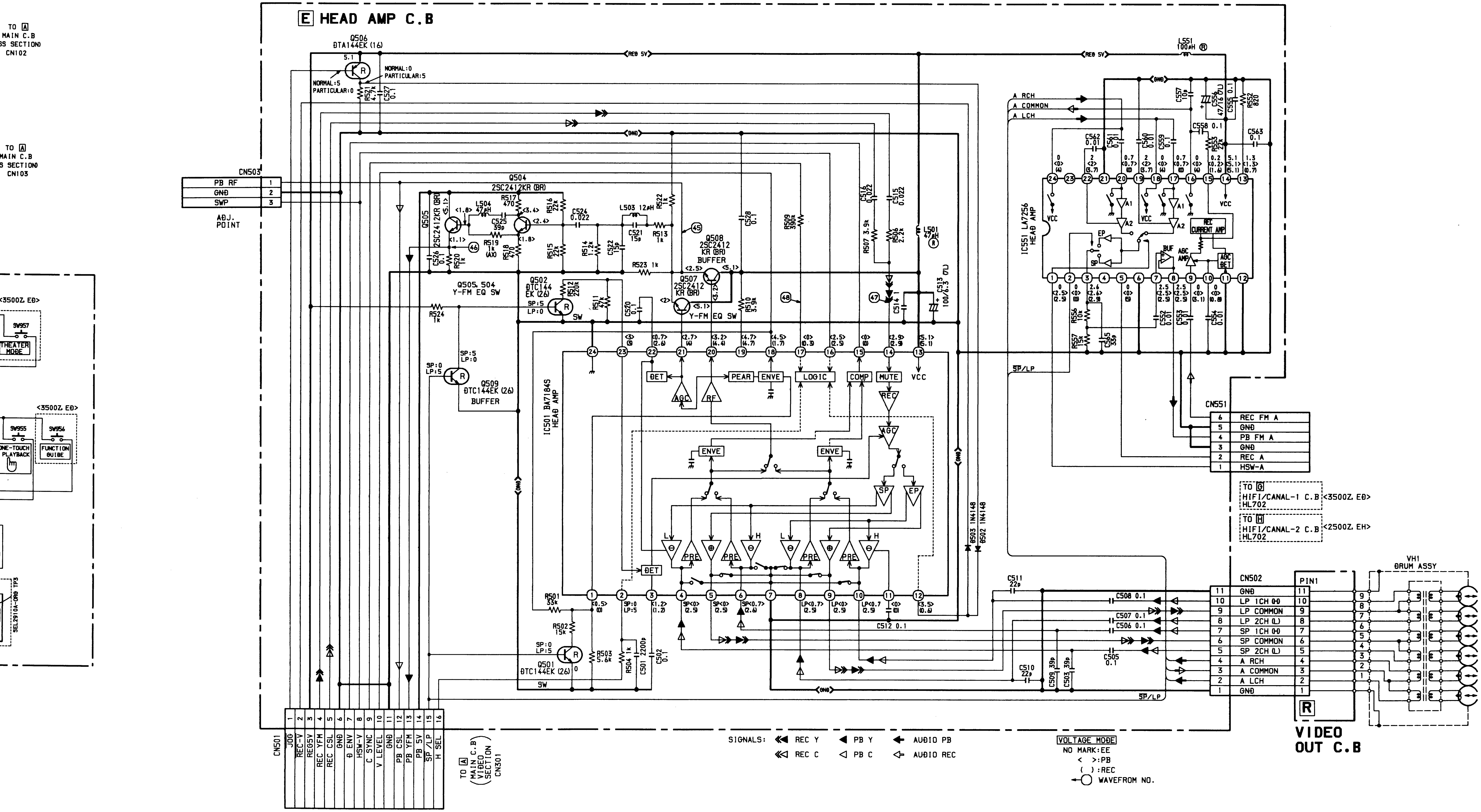

A MAIN (TUNER SECTION) C.B
TU801 TMUG4-104A BG
TO VIDEO SECTION 1D
1D RF V
REG GND 1E
TO POWER SECTION 1E
C840 0.01
CN801
1 SIF
2 TU GND
3 N.C
4 TU GND
5 N.C
6 N.C
7 TU 5V
8 TU A
9 REG GND
10 IIC SDA
11 IIC SCK
12 TU GND
TO J NICAM C.B CN651
<3500ED>
CN802
1 SIF
2 TU GND
3 TU R
4 TU GND
5 TU L
6 TU 9V
7 TU 5V
8 TU A
9 REG GND
10 IIC SDA
11 IIC SCK
12 TU GND
TO I ZWEITON C.B CN451
<3500Z, 2500Z, EH>
1 BB
2 SW1
3 TPSG SW
4 TP801 RF V
5 TP802 RF A
6 SW2
7 MB
8 TU
9 LB
10 AGC
11 NC
12 +B
13 AFT
14 UB
15 HB
16 NC
17 NC
18 NC
19 SW3
20 AUDIO OUT
21 GND
22 AFT OUT
23 SIF
24 NC
25 NC
26 VIDEO OUT
TEST SIGNAL
SW801
OFF
ON
EVER 5V
REG 5V
AGC
AFT BUFF
BUFFER
Q811 2SC2412KR (BR)
Q807
Q808
Q803 REG
Q804 2SA1037KR (FR)
Q801 2SC2412KR (BR)
Q802 2SA1037KR (FR)
Q805 2SA1037KR (FR)
Q806 2SA1037KR (FR)
Q813 2SC2412KR (BR)
D802 HZT33
D803 1SS133 (AX)
LPF
PWM
30V
70V
UNREG70V
GND
TU 9V
9V
REG5V
EVER5V
Q807, 808 AFT LEVEL
Q807 2SC2412KR (BR)
Q808 2SA1037KR (FR)
Q802 VHF LOW SW
Q805 UHF SW
Q806 VHF HIGI SW
TU 5V 1B
REG 5V 2B
TU 9V 3B
EVER 5V 4B
UNREG 70V 5B
REG GND 6B
TU PWM 7B
U BAND 8B
H BAND 9B
L BAND 10B
AFT DEF 11B
T MUTE 12B
AGC LEVEL 13B
AFT CURVE 14B
IIC SDA 15B
IIC SCK 16B
RF A 17B
TU L 18B
TU R 19B
TU V 20B
TO SS SECTION 1B-20B
:VIDEO (PB) SIGNAL
:AUDIO (PB) SIGNAL
:WAVEFORM NO.
:CHECK RAND

WIRING – 2 (FRONT/HEAD AMP SECTION)

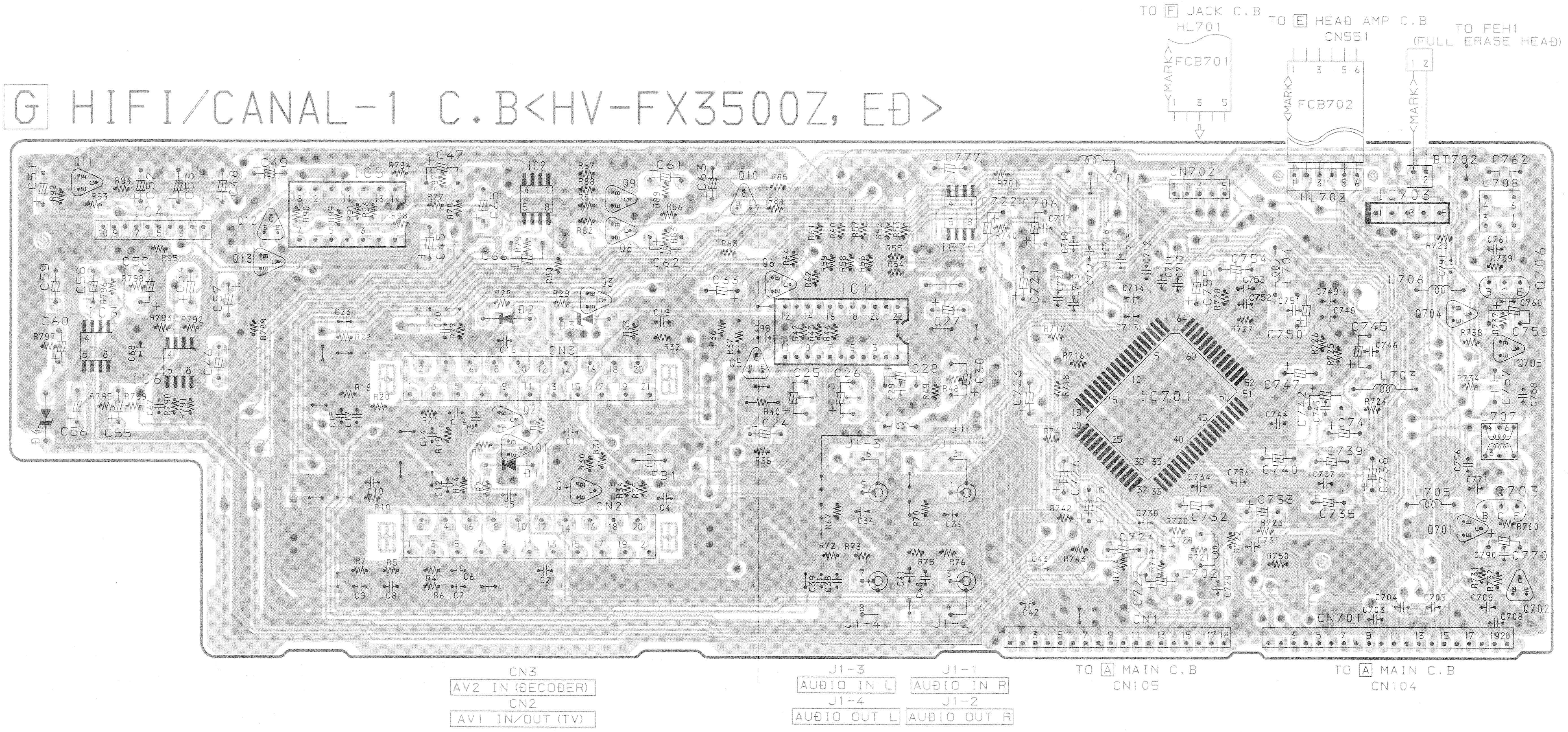

E HEAD AMP C.B
<3500Z, ED> TO G HIFI/CANAL-1 C.B HL702
<2500Z, EH> TO H HIFI/CANAL-2 C.B HL702
FCB702
<MARK>
CN551
CN503
CN502
CN501
IC551
IC501
TO AVH1 (HIFI AUDIO/VIDEO HEAD)
TO A MAIN C.B CN301
D FRONT-3 C.B <HV-FX3500Z, ED>
D971～D976 ROTARY (SHUTTLE LIGHT)
CON971 (BT971)
IC971
<MARK>
F JACK C.B <HV-FX3500Z, ED>
TO G HIFI/CANAL-1 C.B CN702
FCB701
HL701
J701-3
J701-2
J701-1
J701-3 R AUDIO IN
J701-2 L (MONO)
J701-1 VIDEO IN
C FRONT-2 C.B
SW951
SW952
SW953
SW954
SW955
SW956
SW957
D958
D959
CN951
<3500Z, ED>
SW952 EJECT
D958, SW955 ONE-TOUCH PLAYBACK
SW951 POWER ⏻STANDBY/ON
SW953 CHANNEL SW954
SW956 FUNCTION GUIDE <3500Z, ED>
D959, SW957 THEATRE MODE <3500Z, ED>
<3500Z, ED> SW901 (JOG) ▶▶/F FWD ◀◀REW/◀◀
<2500Z,EZ> SW913 PLAY SW912 STOP
D921～D930 (BACK LIGHT)
SW903 PLAY SW902 STOP
B FRONT-1 C.B
IC903
IC901
IC902
FL901
X901
CN901
CN902
CN903
CN904
SERVICE MODE
TO A MAIN C.B CN102
TO A MAIN C.B CN103
SW904 ▶▶/F FWD
SW905 REW/◀◀
<2500Z, EH>
SW907 SW906 <3500Z, ED>
PAUSE/STILL II/▶II
REC/OTR ●
SW911 SW910 <2500Z, EH>
IC902 REMOTE SENSOR
FL901 (DISPLAY)

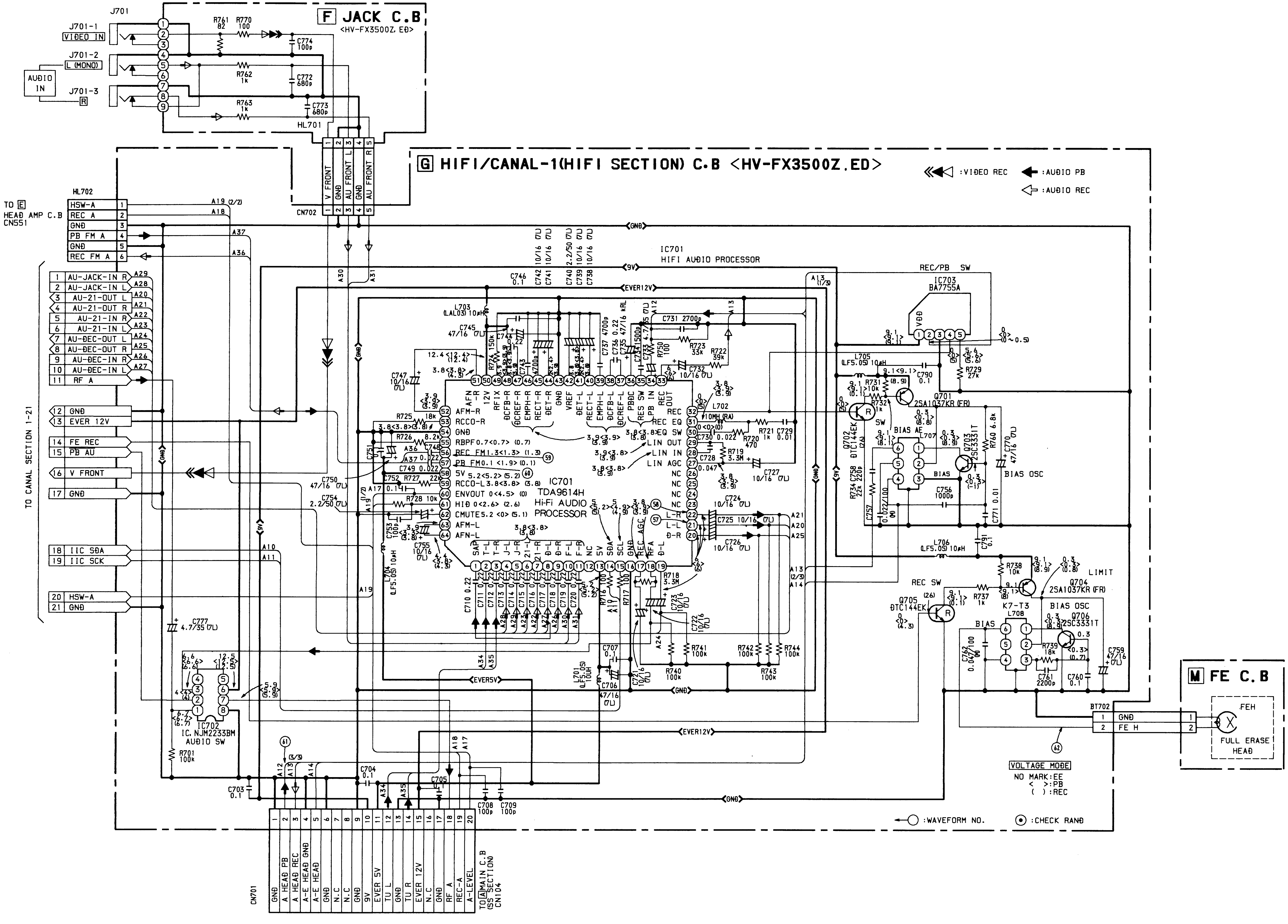

B FRONT-1 C B
C FRONT-2 C.B
D FRONT-3 C.B
<2500Z EH>
<3500Z E0>
<HV-FX3500Z E0>
IC902 0P1U581X REMOTE SENSOR
IC903 BU2092F LED DRIVER
IC901 IC, MN12510F FL DRIVER
IC971 BU2092F LED DRIVER
CN901
FL SI
SS GND
FL DATA
FL SCK
EVER 5V
FL CS
RMC
LED LCK
TO A MAIN C.B (SS SECTION) CN102
CN902
EVER 12V
REG GND
AC 3.5V
EVER -25V
TO A MAIN C.B (SS SECTION) CN103
PIN903 (CN903)
CON971 (BT971)
SERVICE
SW902 STOP
SW903 PLAY
SW904 F FWD
SW905 REW
SW906 REC/OTR
SW907 PAUSE/STILL
SW951 POWER STANDBY/ON
SW952 EJECT
SW957 THEATER MODE
SW953 CHANNEL
SW954 CHANNEL
SW955 ONE-TOUCH PLAYBACK
SW956 FUNCTION GUIDE
CN904
CN951
K4 S0 S2 K3 K2 K1 K0 OTPB THEATER EVER 5V GND
D958 ONE-TOUCH PLAYBACK SLZ-381B-02T-AB-T2 P-ORN
Q951 DTC144EK (26)
D959 THEATER MODE SEL2910A-DR0 TP3
<3500A E0>
LED DRIVER
SW901 ROTARY JOG
F FWD ▶▶ ◀◀ REW
FL901 10BT-108GK (DISPLAY)
REC A-DUB PDC VPS LP EP INDEX A-TR VCR NICAM BIL BAP HI-FI L R AM PM STEREO CH MIX
Q901 DTA114 EK(14)
Q902 DTA114 EK(14)
Q971 2SA1162GR (SG)
Q972 2SA1162GR (SG)
D971 ～ D976 LED, GL3ED8 (ROTARY SHUTTLE LIGHT)
X901 4MHz
L901 10μH
L902 10μH
D901 HZ5C2
D902 1N4148
D904 1N4148
D905 1N4148
D906 1N4148
D908 1N4148
<EVER 5V>
<EVER 12V>
<EVER-25V>
<GND>

SCHEMATIC DIAGRAM – 5 (HEAD AMP SECTION)

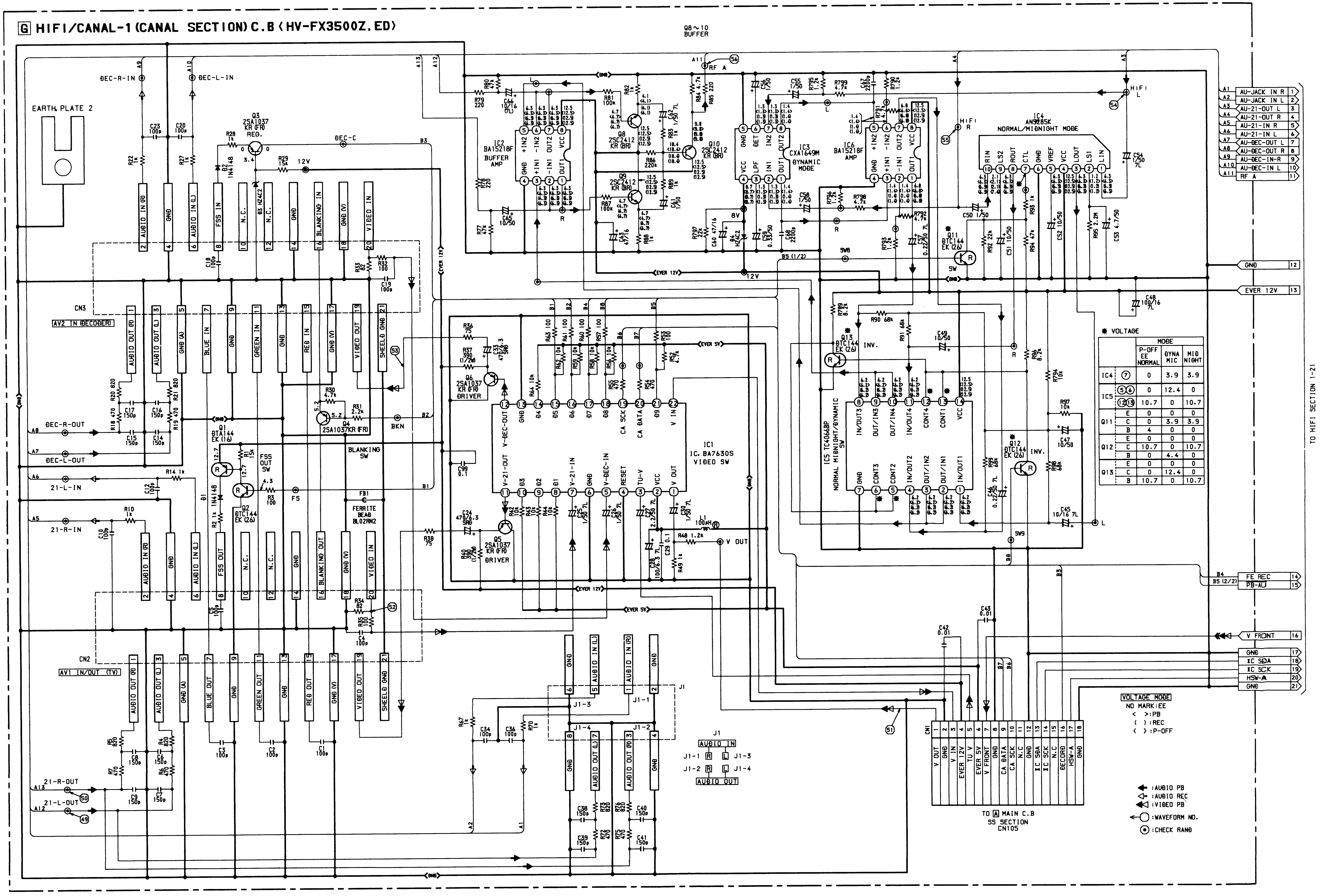

E HEAD AMP C.B
TO A MAIN C.B CN102
TO A MAIN C.B CN103
CN503
PB RF
GND
SWP
ADJ. POINT
Q506 DTA144EK (16)
NORMAL:0 PARTICULAR:5
NORMAL:5 PARTICULAR:0
R521 4.7k
C527 0.1
Q504 2SC2412KR (BR)
Q505 2SC2412KR (BR)
L504 47μH
R517 470
C525 39p
R519 1k
R518 470
R516 22k
C524 0.022
R515 22k
R514 1.2k
C522 15p
L503 12μH
C521 15p
R513 1k
R522 1k
R523 1k
Q508 2SC2412 KR (BR) BUFFER
Q507 2SC2412 KR (BR) Y-FM EQ SW
Q505, 504 Y-FM EQ SW
Q502 DTC144 EK (26)
SP:5 LP:0
R512 220k
R511 47k
C520 0.1
R524 1k
Q509 DTC144EK (26) BUFFER
SP:0 LP:5
IC501 BA7184S HEAD AMP
DET
AGC
RF
PEAR
ENVE
LOGIC
COMP
MUTE
REC
VCC
PRE
R501 33k
R502 15k
Q501 DTC144EK (26)
R503 5.6k
R504 1k
C501 2200p
C502 0.1
SW
C528 0.1
R509 390k
R507 3.9k
R506 2.2k
C516 0.022
C515 0.022
L501 47μH
C514 1
C513 100/6.3
R510 3.9k
C512 0.1
D503 1N4148
D502 1N4148
C511 22p
C510 22p
C509 39p
C503 39p
C508 0.1
C507 0.1
C506 0.1
C505 0.1
SP/LP
L551 100μH
IC551 LA7256 HEAD AMP
C557 10p
C556 47/16
C555 0.1
R552 820
C562 0.01
C561 0.01
C560 0.01
C559 0.01
C558 0.1
R553 22k
C563 0.1
A1
A2
EP
SP
BUF
AGC AMP
REC CURRENT AMP
AGC DET
R556 10k
R557 15k
C565 33p
C552 0.01
C553 0.01
C554 0.01
A RCH
A COMMON
A LCH
CN551
REC FM A
PB FM A
REC A
HSW-A
TO G HIFI/CANAL-1 C.B HL702 <3500Z, EG>
TO H HIFI/CANAL-2 C.B HL702 <2500Z, EH>
CN502
PIN1
LP 1CH (H)
LP COMMON
LP 2CH (L)
SP 1CH (H)
SP COMMON
SP 2CH (L)
VH1 DRUM ASSY
VL2 HEAD
VR2 HEAD
VR1 HEAD
VL1 HEAD
AR HEAD
AL HEAD
R VIDEO OUT C.B
CN501
JOG
REC-V
REG5V
REC YFM
REC CSL
D ENV
HSW-V
C SYNC
V LEVEL
PB CSL
PB YFM
PB 5V
SP/LP
H SEL
TO A MAIN C.B (VIDEO SECTION) CN301
<3500Z, EG>
SW957 THEATER MODE
SW955 ONE-TOUCH PLAYBACK
SW956 FUNCTION GUIDE
SEL2910A-GR0 TP3
SIGNALS: REC Y PB Y AUDIO PB
REC C PB C AUDIO REC
VOLTAGE MODE
NO MARK:EE
< >:PB
( ):REC
WAVEFROM NO.

G HIFI/CANAL-1 C.B<HV-FX3500Z, EĐ>


TO F JACK C.B
HL701
FCB701
<MARK>
TO E HEAD AMP C.B
CN551
FCB702
TO FEH1
(FULL ERASE HEAD)
HL702
IC703
BT702
CN702
IC701
IC702
IC1
IC2
IC3
IC4
IC5
IC6
CN3
CN2
J1-1
J1-2
J1-3
J1-4
CN1
CN701
CN3
AV2 IN (DECODER)
CN2
AV1 IN/OUT (TV)
J1-3
AUDIO IN L
J1-4
AUDIO OUT L
J1-1
AUDIO IN R
J1-2
AUDIO OUT R
TO A MAIN C.B
CN105
TO A MAIN C.B
CN104


F JACK C.B
<HV-FX3500Z.ED>
J701
J701-1
VIDEO IN
J701-2
L (MONO)
AUDIO IN
J701-3
R
R761 82
R770 100
C774 100p
R762 1k
C772 680p
R763 1k
C773 680p
HL701
V FRONT
GND
AU FRONT L
GND
AU FRONT R
CN702
G HIFI/CANAL-1(HIFI SECTION) C.B <HV-FX3500Z.ED>
:VIDEO REC
:AUDIO PB
:AUDIO REC
HL702
TO E HEAD AMP C.B CN551
HSW-A
REC A
GND
PB FM A
GND
REC FM A
AU-JACK-IN R
AU-JACK-IN L
AU-21-OUT L
AU-21-OUT R
AU-21-IN R
AU-21-IN L
AU-DEC-OUT L
AU-DEC-OUT R
AU-DEC-IN R
AU-DEC-IN L
RF A
GND
EVER 12V
FE REC
PB AU
V FRONT
GND
IIC SDA
IIC SCK
HSW-A
GND
TO CANAL SECTION 1-21
IC701
HIFI AUDIO PROCESSOR
IC701 TDA9614H Hi-Fi AUDIO PROCESSOR
AFM-R
RCCO-R
GND
RBPF
REC FM
PB FM
5V
RCCO-L
ENVOUT
HID
CMUTE
AFM-L
AFN-L
REC
REC EQ
EQ SW
LIN OUT
LIN IN
LIN AGC
NC
L-R
L-L
D-R
REC/PB SW
IC703 BA7755A
VDD
L705 (LF5.05) 10µH
Q701 2SA1037KR (FR)
Q702 DTC144EK
SW
BIAS
L707
Q703 2SC3331T
BIAS OSC
L706 (LF5.05) 10µH
LIMIT
Q704 2SA1037KR (FR)
REC SW
Q705 DTC144EK
K7-T3 L708
BIAS OSC
Q706 2SC3331T
IC702 IC, NJM2233BM AUDIO SW
R701 100k
C777 4.7/35 (7L)
C703 0.1
C704 0.1
C705
C708 100p
C709 100p
(GND)
(9V)
(EVER12V)
(EVER5V)
BT702
GND
FE H
M FE C.B
FEH
FULL ERASE HEAD
VOLTAGE MODE
NO MARK:EE
< >:PB
( ):REC
:WAVEFORM NO.
:CHECK RAND
CN701
GND
A HEAD PB
A HEAD REC
A-E HEAD GND
A-E HEAD
GND
N.C
N.C
GND
9V
EVER 5V
TU L
GND
TU R
EVER 12V
N.C
GND
RF A
REC-A
A-LEVEL
TO A MAIN C.B (SS SECTION) CN104

SCHEMATIC DIAGRAM – 7 (CANAL SECTION) < HV-FX3500 >


G HIFI/CANAL-1 (CANAL SECTION) C.B (HV-FX3500Z.ED)
Q8~10 BUFFER
EARTH PLATE 2
DEC-R-IN
DEC-L-IN
Q3 2SA1037 KR (FR) REG.
IC2 BA15218F BUFFER AMP
IC3 CXA1649M DYNAMIC MODE
IC4 BA15218F AMP
IC4 AN5285K NORMAL/MIDNIGHT MODE
IC1 IC BA7630S VIDEO SW
IC5 TC4066BP NORMAL MIDNIGHT/DYNAMIC SW
Q1 DTA144 EK (16)
Q2 DTC144 EK (26) FSS OUT SW
Q4 2SA1037KR (FR) BLANKING SW
Q5 2SA1037 KR (FR) DRIVER
Q6 2SA1037 KR (FR) DRIVER
Q11 DTC144 EK (26) SW
Q12 DTC144 EK (26) INV.
Q13 DTC144 EK (26) INV.
FB1 FERRITE BEAD BL02RN2
CN3 AV2 IN (DECODER)
CN2 AV1 IN/OUT (TV)
J1 AUDIO IN J1-1 R L J1-3 J1-2 R L J1-4 AUDIO OUT
TO A MAIN C.B SS SECTION CN105
TO HIFI SECTION 1-21
AU-JACK IN R 1
AU-JACK IN L 2
AU-21-OUT L 3
AU-21-OUT R 4
AU-21-IN R 5
AU-21-IN L 6
AU-DEC-OUT L 7
AU-DEC-OUT R 8
AU-DEC-IN-R 9
AU-DEC-IN L 10
RF A 11
GND 12
EVER 12V 13
FE REC 14
PB-AU 15
V FRONT 16
GND 17
IC SDA 18
IC SCK 19
HSW-A 20
GND 21
CN1 1 V OUT 2 GND 3 V IN 4 EVER 12V 5 TU V 6 EVER 5V 7 V FRONT 8 GND 9 CA DATA 10 CA SCK 11 N.C 12 N.C 13 IC SDA 14 N.C 15 IC SCK 16 DECORD 17 HSW-A 18 GND

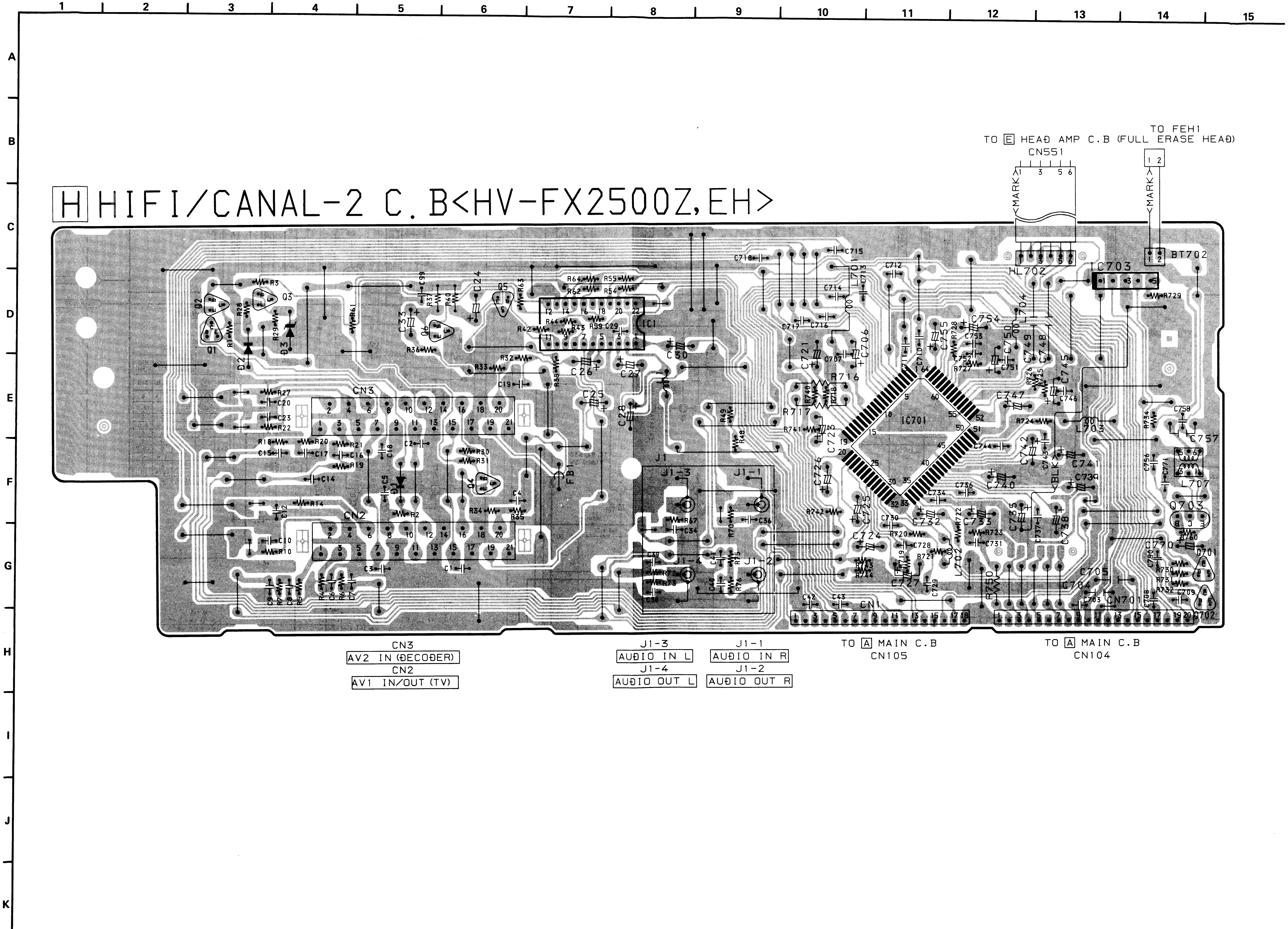
✱ VOLTAGE

		MODE		
		P-OFF EE NORMAL	DYNA MIC	MID NIGHT
IC4	⑦	0	3.9	3.9
IC5	⑤⑥	0	12.4	0
	⑫⑬	10.7	0	10.7
Q11	E	0	0	0
	C	0	3.9	3.9
	B	4	0	0
Q12	E	0	0	0
	C	10.7	0	10.7
	B	0	4.4	0
Q13	E	0	0	0
	C	0	12.4	0
	B	10.7	0	10.7

VOLTAGE MODE
NO MARK:EE
< >:PB
( ):REC
{ }:P-OFF

◀ :AUDIO PB
◁ :AUDIO REC
◀◁ :VIDEO PB
←○ :WAVEFORM NO.
⊙ :CHECK RAND

WIRING – 4 (Hi-Fi／CANAL – 2 SECTION) < HV-FX2500 >



1
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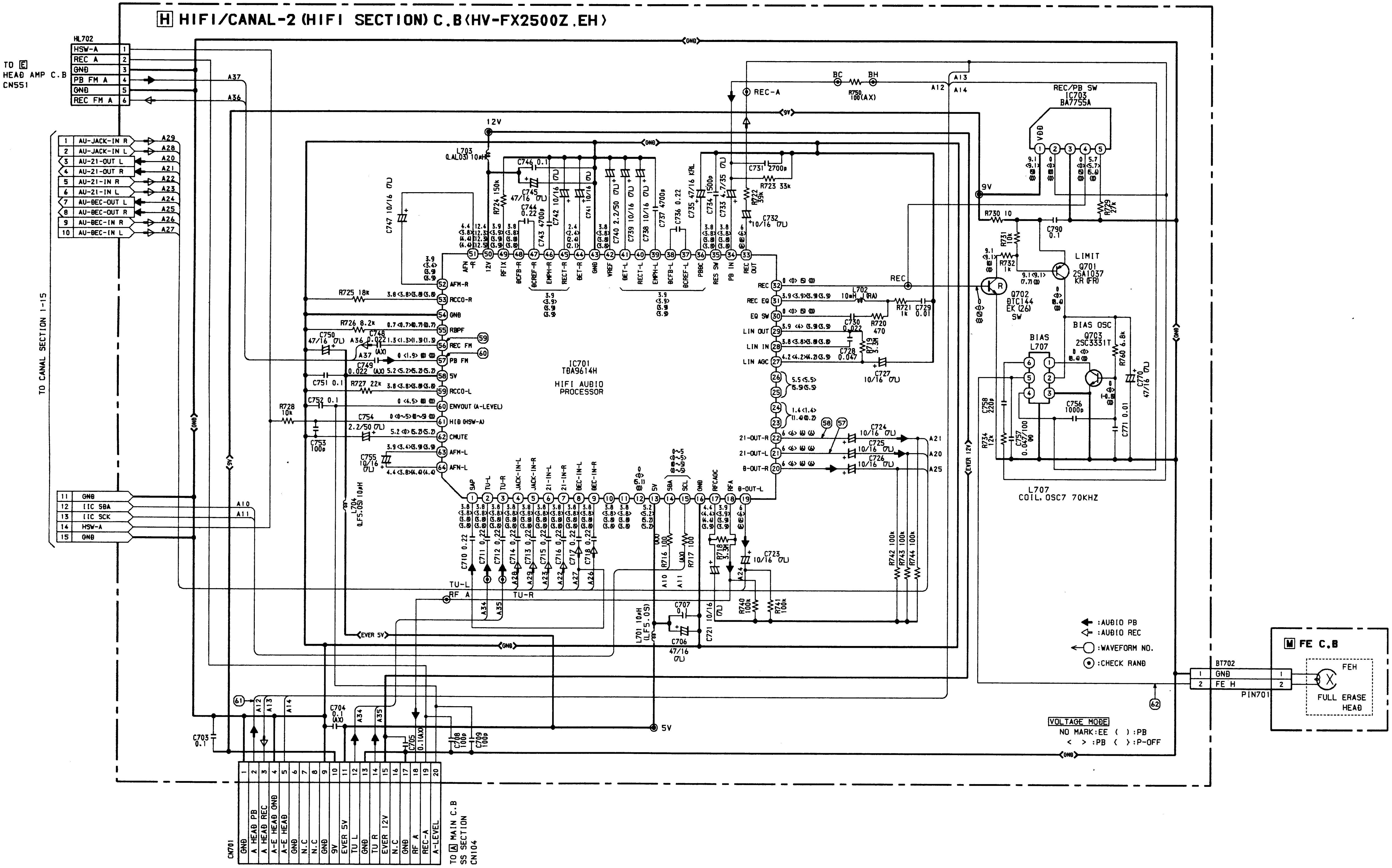
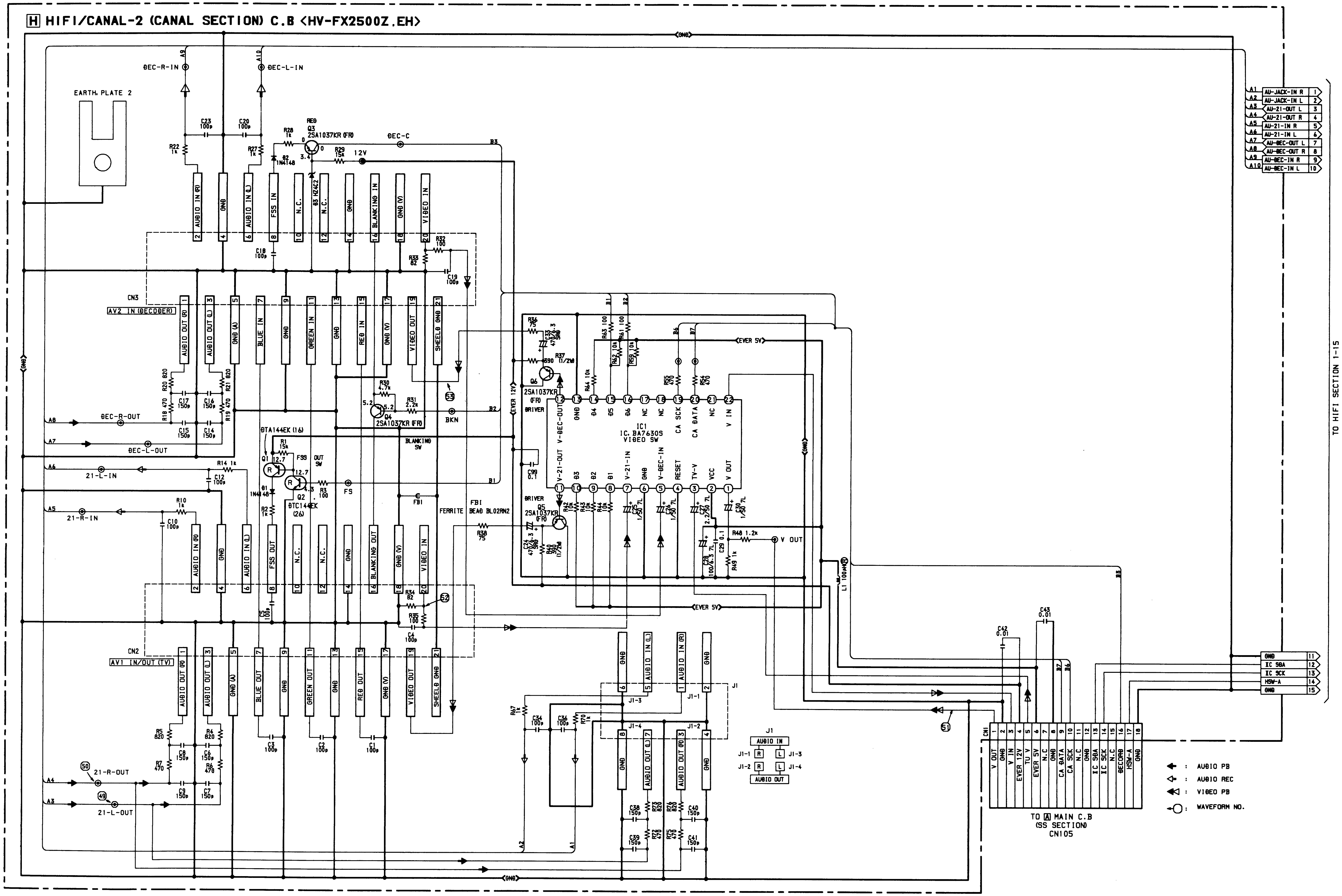
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
H HIFI/CANAL-2 C.B<HV-FX2500Z,EH>
TO FEH1
TO E HEAD AMP C.B (FULL ERASE HEAD)
CN551
MARK
HL702
IC703
BT702
IC1
IC701
CN3
CN2
CN1
CN701
J1
J1-3
J1-1
J1-4
J1-2
Q1
Q2
Q3
Q4
Q5
Q6
Q701
Q702
Q703
D1
D2
D3
FB1
L701
L702
L703
L704
L707
BLK
CN3
AV2 IN (DECODER)
CN2
AV1 IN/OUT (TV)
J1-3
AUDIO IN L
J1-4
AUDIO OUT L
J1-1
AUDIO IN R
J1-2
AUDIO OUT R
TO A MAIN C.B
CN105
TO A MAIN C.B
CN104

SCHEMATIC DIAGRAM – 8 (Hi-Fi – 2 SECTION) < HV-FX2500 >



H HIFI/CANAL-2 (HIFI SECTION) C.B (HV-FX2500Z.EH)
HL702
1 HSW-A
2 REC A
3 GND
4 PB FM A
5 GND
6 REC FM A
TO E HEAD AMP C.B CN551
A37
A36
1 AU-JACK-IN R A29
2 AU-JACK-IN L A28
3 AU-21-OUT L A20
4 AU-21-OUT R A21
5 AU-21-IN R A22
6 AU-21-IN L A23
7 AU-DEC-OUT L A24
8 AU-DEC-OUT R A25
9 AU-DEC-IN R A26
10 AU-DEC-IN L A27
TO CANAL SECTION 1-15
11 GND
12 IIC SDA
13 IIC SCK
14 HSW-A
15 GND
A10
A11
12V
L703 (LAL03) 10μH
C744 0.1
C745 47/16 (7L)
C744 0.22
C743 4700p
R724 150k
C747 10/16 (7L)
C742 10/16 (7L)
C741 10/16 (7L)
C740 2.2/50 (7L)
C739 10/16 (7L)
C738 10/16 (7L)
C737 4700p
C736 0.22
C735 47/16 KRL
C734 1500p
C733 4.7/35 (7L)
C731 2700p
R723 33k
R722 39k
C732 10/16 (7L)
AFM-R
RCCO-R
GND
RBPF
REC FM
PB FM
5V
RCCO-L
ENVOUT (A-LEVEL)
HID (HSW-A)
CMUTE
AFM-L
AFN-L
R725 18k
R726 8.2k
C748 0.022 (AX)
C750 47/16 (7L)
C749 0.022 (AX)
C751 0.1
R727 22k
C752 0.1
R728 10k
C754 2.2/50 (7L)
C753 100p
C755 10/16 (7L)
A37
A36
IC701 TDA9614H HIFI AUDIO PROCESSOR
REC
REC EQ
EQ SW
LIN OUT
LIN IN
LIN AGC
L702 10μH (RA)
R721 1k
C729 0.01
C730 0.022
R720 470
C728 0.047
R719 3.3k
C727 10/16 (7L)
21-OUT-R
21-OUT-L
D-OUT-R
D-OUT-L
C724 10/16 (7L)
C725 10/16 (7L)
C726 10/16 (7L)
A21
A20
A25
SAP
TU-L
TU-R
JACK-IN-L
JACK-IN-R
21-IN-L
21-IN-R
DEC-IN-L
DEC-IN-R
SDA
SCL
GND
RFCADC
RFA
C710 0.22
C711 0.22
C712 0.22
C714 0.22
C713 0.22
C715 0.22
C716 0.22
C717 0.22
C718 0.22
R716 100
R717 100
R718 3.3k
C723 10/16 (7L)
R742 100k
R743 100k
R744 100k
R740 100k
R741 100k
L704 (LF5.0S) 10μH
L701 10μH (LF5.0S)
C707 0.1
C706 47/16 (7L)
C721 10/16 (7L)
TU-L
RF A
TU-R
A34
A35
EVER 5V
GND
5V
REC-A
BC
BH
R750 100(AX)
A12
A13
A14
REC/PB SW IC703 BA7755A
VDD
9V
R730 10
C790 0.1
R729 27k
R731 10k
R732 1k
LIMIT
Q701 2SA1037 KR (FR)
Q702 DTC144 EK (26) SW
BIAS OSC
Q703 2SC3331T
BIAS L707
R760 6.8k
C770 47/16 (7L)
C758 220p
R734 12k
C757 0.047/100
C756 1000p
C771 0.01
L707 COIL, OSC7 70KHZ
EVER 12V
←:AUDIO PB
←:AUDIO REC
←○:WAVEFORM NO.
◉:CHECK RAND
VOLTAGE MODE
NO MARK:EE ( ):PB
< >:PB ( ):P-OFF
M FE C.B
BT702
1 GND
2 FE H
PIN701
FEH
FULL ERASE HEAD
C704 0.1 (AX)
C703 0.1
C705 0.1(AX)
C708 100p
C709 100p
CN701
1 GND
2 A HEAD PB
3 A HEAD REC
4 A-E HEAD GND
5 A-E HEAD
6 GND
7 N.C
8 N.C
9 GND
10 9V
11 EVER 5V
12 TU L
13 GND
14 TU R
15 EVER 12V
16 N.C
17 GND
18 RF A
19 REC-A
20 A-LEVEL
TO A MAIN C.B SS SECTION CN104

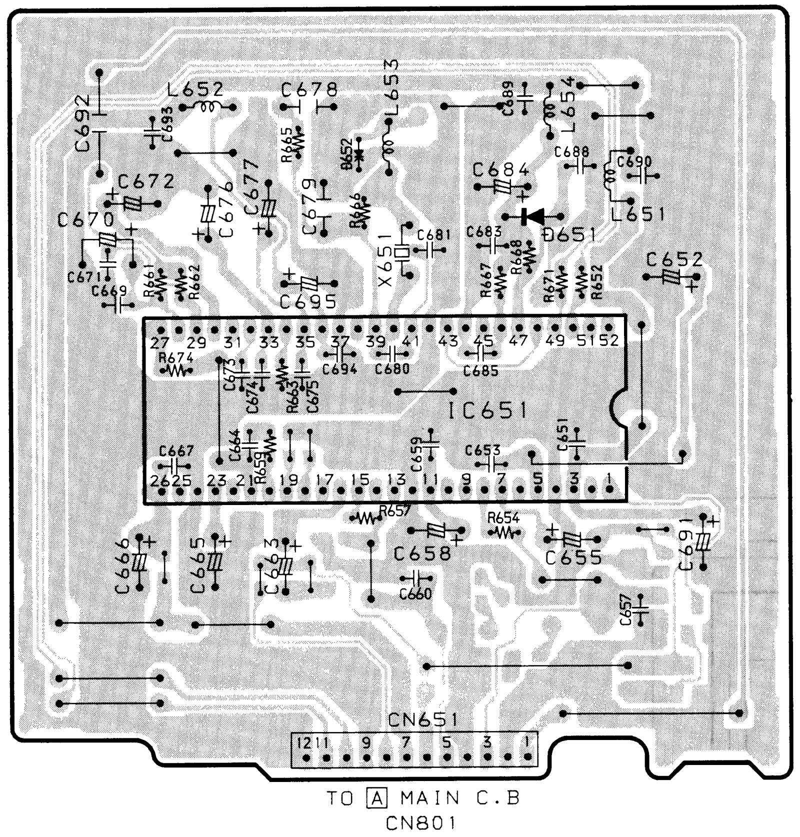
SCHEMATIC DIAGRAM – 9 (CANAL SECTION) < HV-FX2500 >



H HIFI/CANAL-2 (CANAL SECTION) C.B <HV-FX2500Z.EH>
EARTH PLATE 2
DEC-R-IN
DEC-L-IN
DEC-C
12V
Q3 2SA1037KR (FR)
D2 1N4148
D3 HZ4C2
CN3
AV2 IN (DECODER)
AUDIO IN (R)
GND
AUDIO IN (L)
FSS IN
N.C.
BLANKING IN
GND (V)
VIDEO IN
AUDIO OUT (R)
AUDIO OUT (L)
GND (A)
BLUE IN
GREEN IN
RED IN
VIDEO OUT
SHEELD GND
DEC-R-OUT
DEC-L-OUT
21-L-IN
21-R-IN
DTA144EK (16)
Q1
Q2
DTC144EK (26)
D1 1N4148
FSS OUT SW
FS
BLANKING SW
Q4 2SA1037KR (FR)
BKN
FB1
FERRITE BEAD BL02RN2
Q6 2SA1037KR (FR) DRIVER
Q5 2SA1037KR (FR) DRIVER
IC1 IC, BA7630S VIDEO SW
V-DEC-OUT
V-21-OUT
V-21-IN
V-DEC-IN
RESET
TV-V
VCC
V OUT
CA SCK
CA DATA
NC
V IN
D1
D2
D3
D4
D5
D6
EVER 5V
EVER 12V
L1 100μH
CN2
AV1 IN/OUT (TV)
BLUE OUT
GREEN OUT
RED OUT
FSS OUT
BLANKING OUT
21-R-OUT
21-L-OUT
J1
J1-1
J1-2
J1-3
J1-4
AUDIO IN
AUDIO OUT
AUDIO IN (L)
AUDIO IN (R)
AUDIO OUT (L)
AUDIO OUT (R)
A1 AU-JACK-IN R 1
A2 AU-JACK-IN L 2
A3 AU-21-OUT L 3
A4 AU-21-OUT R 4
A5 AU-21-IN R 5
A6 AU-21-IN L 6
A7 AU-DEC-OUT L 7
A8 AU-DEC-OUT R 8
A9 AU-DEC-IN R 9
A10 AU-DEC-IN L 10
GND 11
IC SDA 12
IC SCK 13
HSW-A 14
GND 15
TO HIFI SECTION 1-15
CN1
V OUT
GND
V IN
EVER 12V
TU V
EVER 5V
N.C
GND
CA DATA
CA SCK
N.C
GND
IC SDA
IC SCK
N.C
DECORD
HSW-A
GND
TO A MAIN C.B (SS SECTION) CN105
(GND)
: AUDIO PB
: AUDIO REC
: VIDEO PB
: WAVEFORM NO.
(49)
(50)
(51)
(52)
(53)

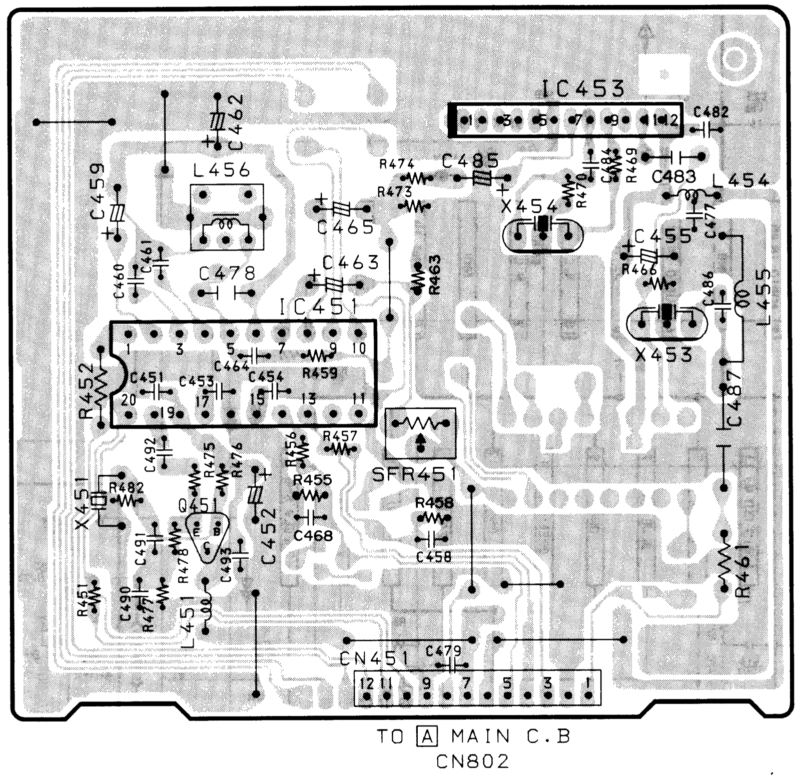
WIRING – 5 (NICAM/ZWEITON SECTION)

J NICAM C.B <HV-FX3500ED>



IC651
CN651
X651
D651
L651
L652
L653
L654
C652
C655
C658
C660
C665
C666
C667
C670
C672
C676
C677
C678
C679
C684
C691
C692
C695
R654
R657
R674
TO A MAIN C.B
CN801

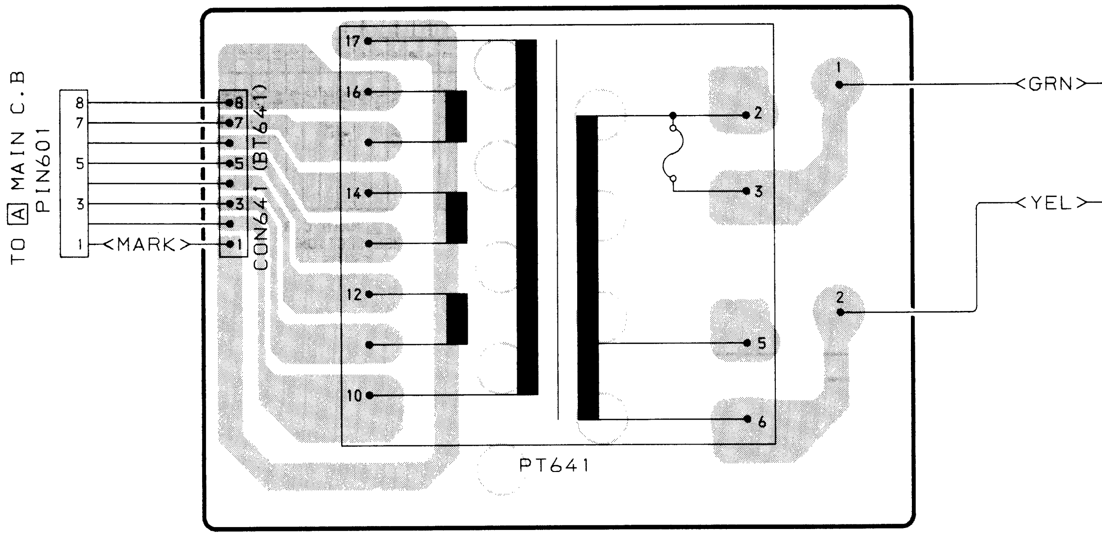
<HV-FX3500Z>
I ZWEITON C.B<HV-FX2500Z,EH>



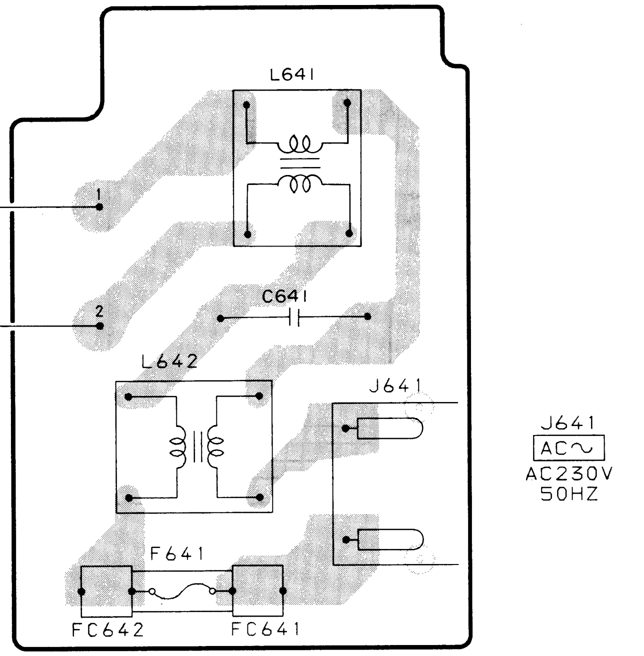
IC453
IC451
CN451
SFR451
X451
X453
X454
Q451
L451
L454
L455
L456
C452
C455
C459
C462
C463
C465
C468
C478
C479
C483
C485
C487
R452
R455
R457
R458
R461
R463
TO A MAIN C.B
CN802

K POWER-1 C.B

L POWER-2 C.B

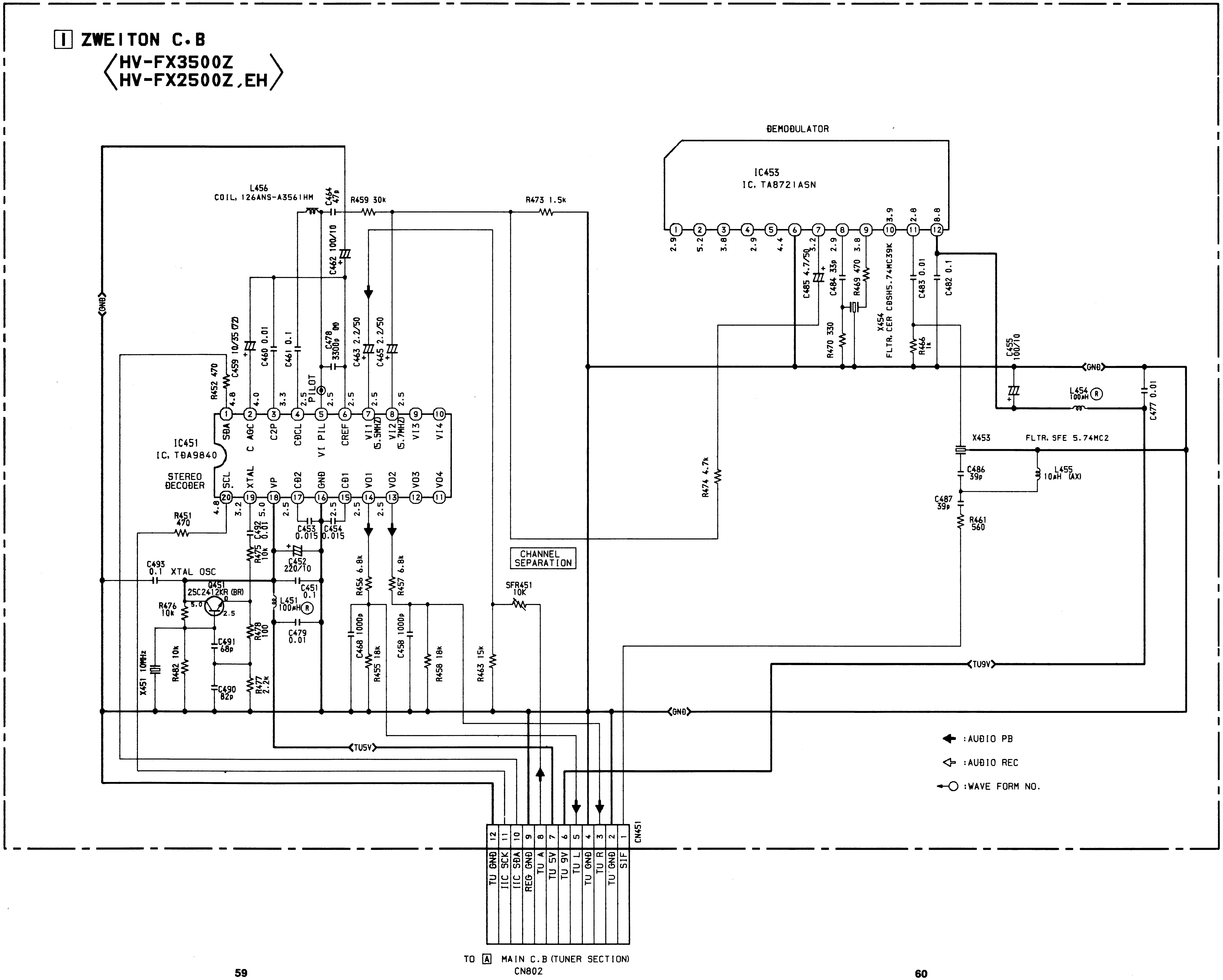


TO A MAIN C.B PIN601
<MARK>
CON641 (BT641)
PT641
17
16
14
12
10
2
3
5
6
1
2
<GRN>
<YEL>

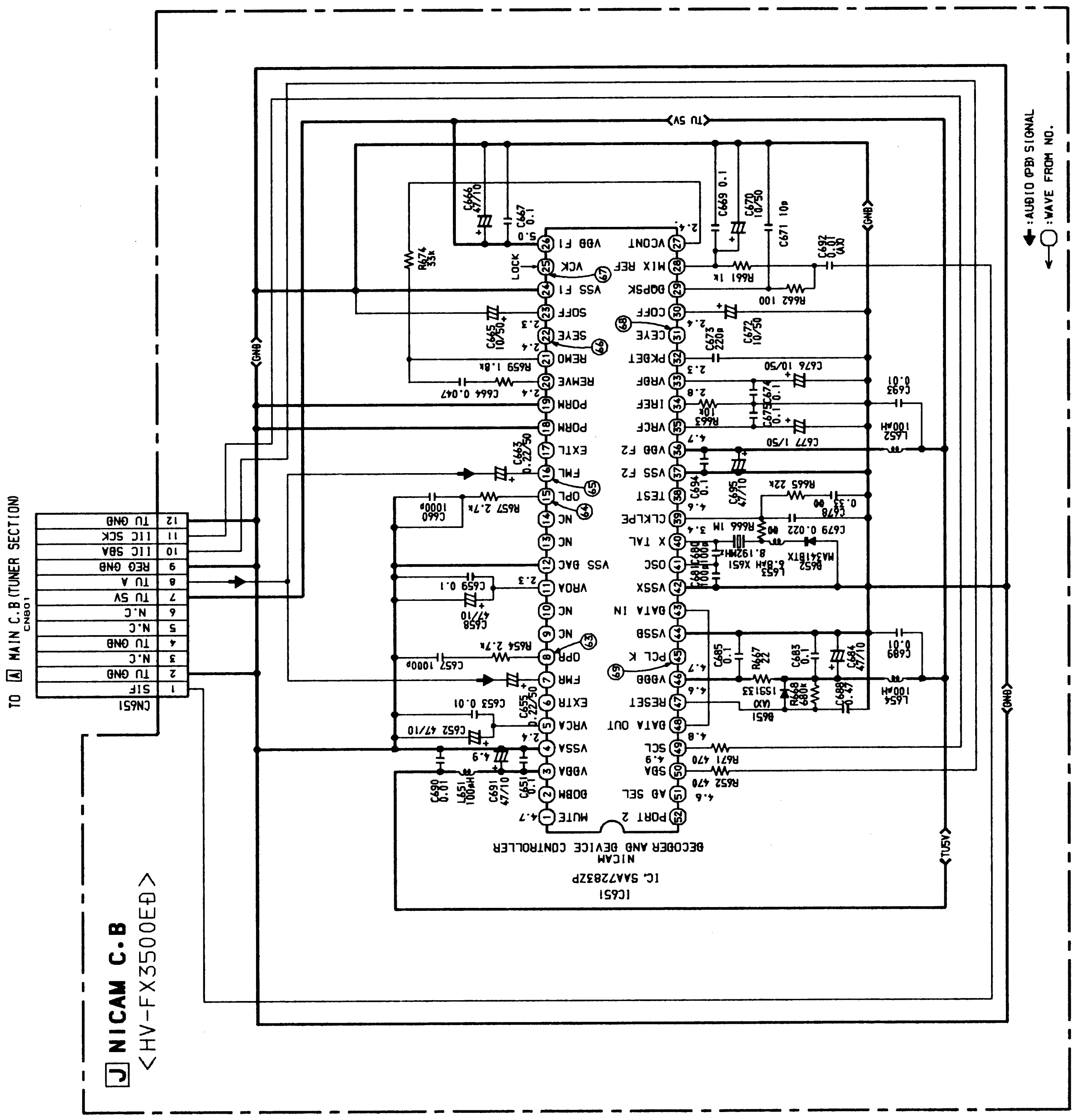


L641
C641
L642
J641
F641
FC642
FC641
1
2
J641
AC~
AC230V
50HZ

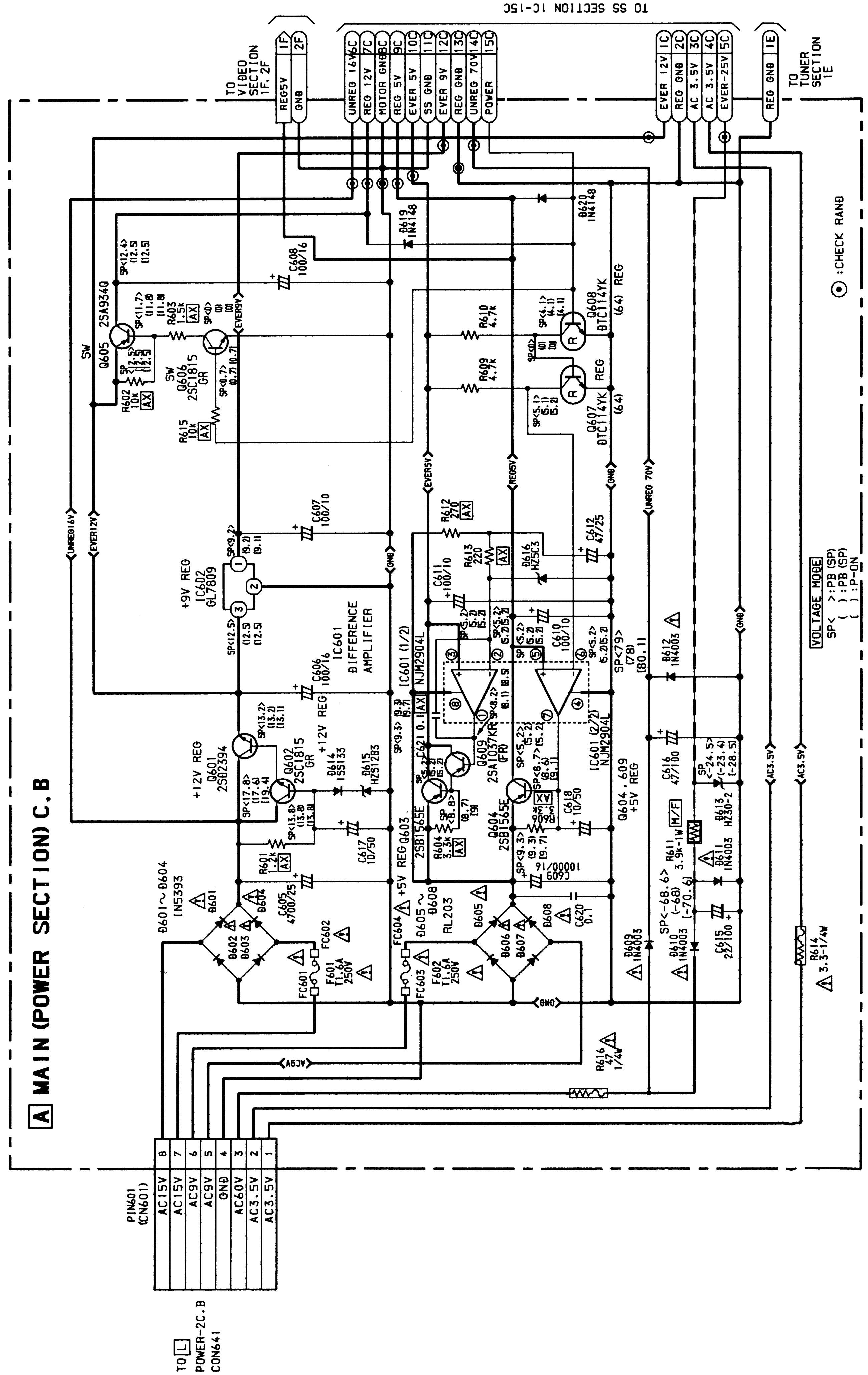
SCHEMATIC DIAGRAM – 10 (ZWEITON SECTION)


I ZWEITON C.B
⟨HV-FX3500Z
⟨HV-FX2500Z, EH⟩
DEMODULATOR
IC453
IC, TA8721ASN
IC451
IC, TDA9840
STEREO DECODER
L456
COIL, 126ANS-A3561HM
C464 47p
R459 30k
R473 1.5k
C462 100/10
C459 10/35 (TZ)
C460 0.01
C461 0.1
C478 3300p (M)
C463 2.2/50
C465 2.2/50
R452 470
PILOT
SDA
C AGC
C2P
CDCL
VI PIL
CREF
VI1 (5.5MHZ)
VI2 (5.7MHZ)
VI3
VI4
SCL
XTAL
VP
CD2
GND
CD1
VO1
VO2
VO3
VO4
R451 470
C492 0.01
R475 10k
C453 0.015
C454 0.015
C452 220/10
C493 0.1
XTAL OSC
Q451 2SC2412KR (BR)
R476 10k
C451 0.1
L451 100μH (R)
C479 0.01
C491 68p
R478 100
X451 10MHz
R482 10k
C490 82p
R477 2.2k
R456 6.8k
R457 6.8k
C468 1000p
R455 18k
C458 1000p
R458 18k
R463 15k
SFR451 10K
CHANNEL SEPARATION
R474 4.7k
C485 4.7/50
C484 33p
R469 470
R470 330
X454 FLTR, CER CDSH5.74MC39K
C483 0.01
R466 1k
C482 0.1
C455 100/10
L454 100μH (R)
C477 0.01
X453
FLTR, SFE 5.74MC2
C486 39p
L455 10μH (AX)
C487 39p
R461 560
GND
TU9V
TU5V
:AUDIO PB
:AUDIO REC
:WAVE FORM NO.
CN451
TU GND
IIC SCK
IIC SDA
REG GND
TU A
TU 5V
TU 9V
TU L
TU GND
TU R
TU GND
SIF
TO A MAIN C.B (TUNER SECTION)
CN802

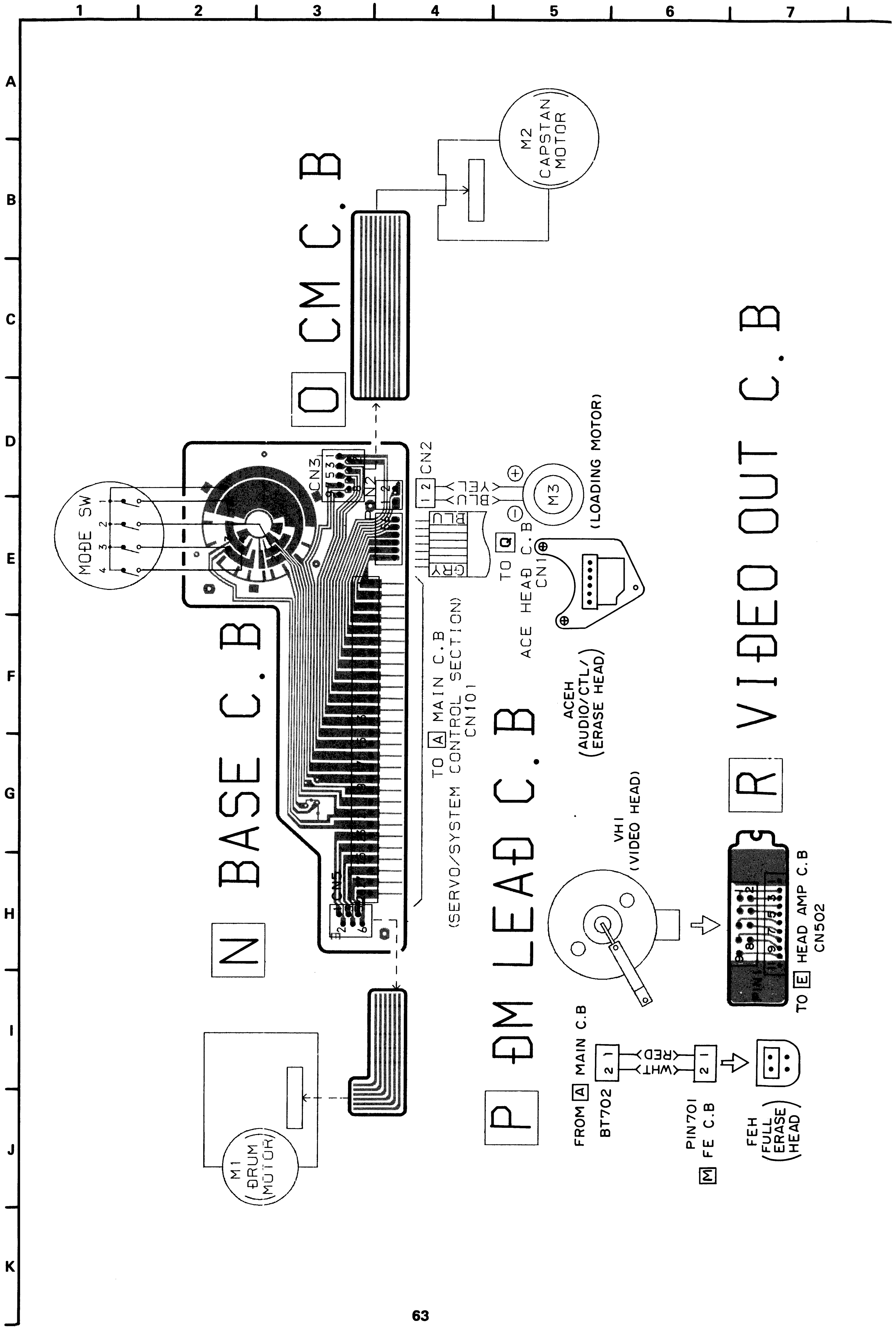
SCHEMATIC DIAGRAM – 11 (NICAM SECTION) < HV-FX3500 >


J NICAM C.B
<HV-FX3500ED>
IC651
IC SAA7283ZP
NICAM
DECODER AND DEVICE CONTROLLER
TO A MAIN C.B (TUNER SECTION) CN801
CN651
:AUDIO (PB) SIGNAL
:WAVE FROM NO.

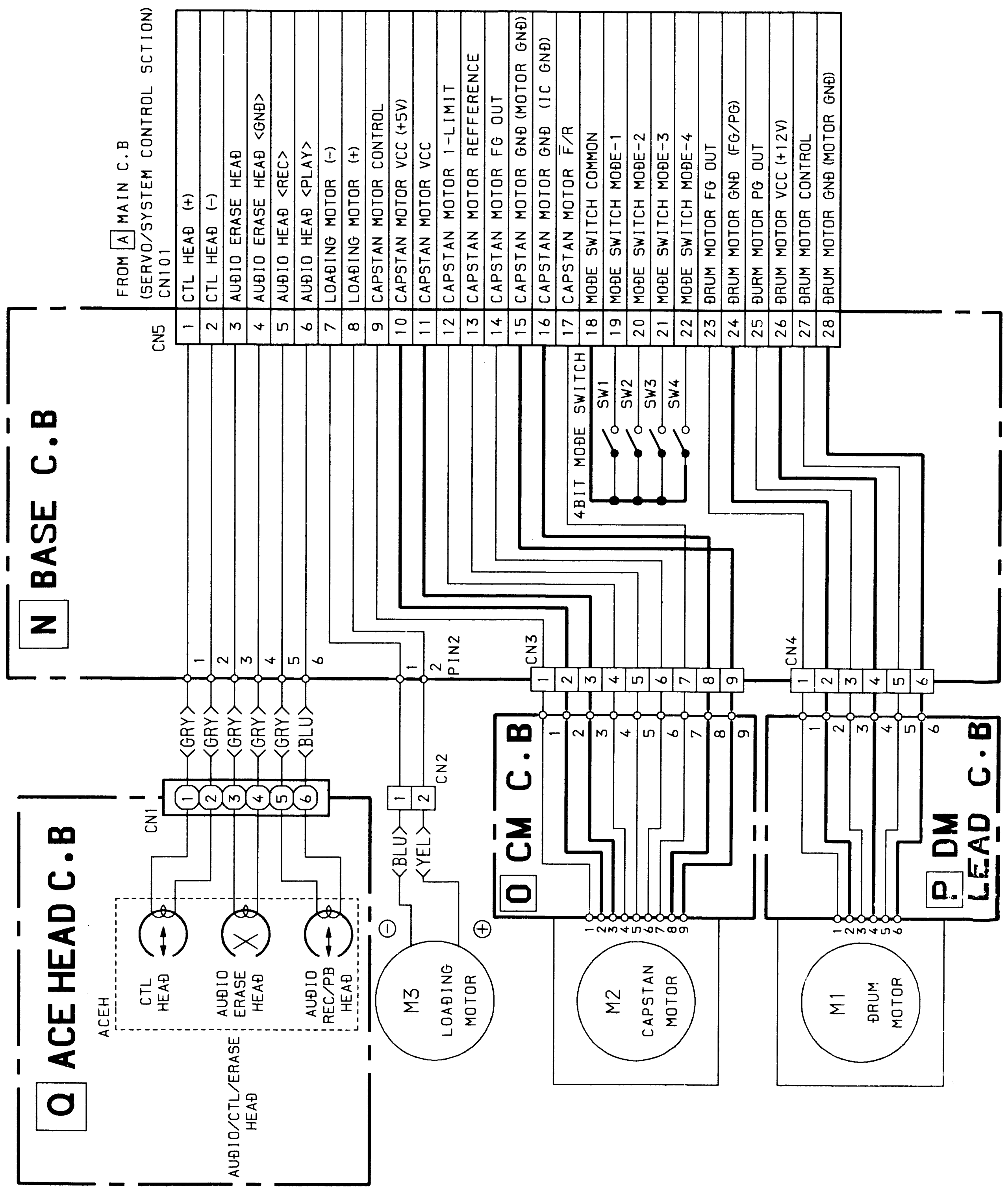
SCHEMATIC DIAGRAM – 12 (POWER SECTION)


A MAIN (POWER SECTION) C.B
TO SS SECTION 1C-15C
TO VIDEO SECTION 1F, 2F
TO TUNER SECTION 1E
⊙ :CHECK RAND
VOLTAGE MODE
SP< >:PB (SP)
( ):PB (SP)
[ ]:P-ON
+9V REG IC602 GL7809
IC601 DIFFERENCE AMPLIFIER
Q604, 609 +5V REG
PIN601 (CN601)
TO L POWER-2C.B CON641

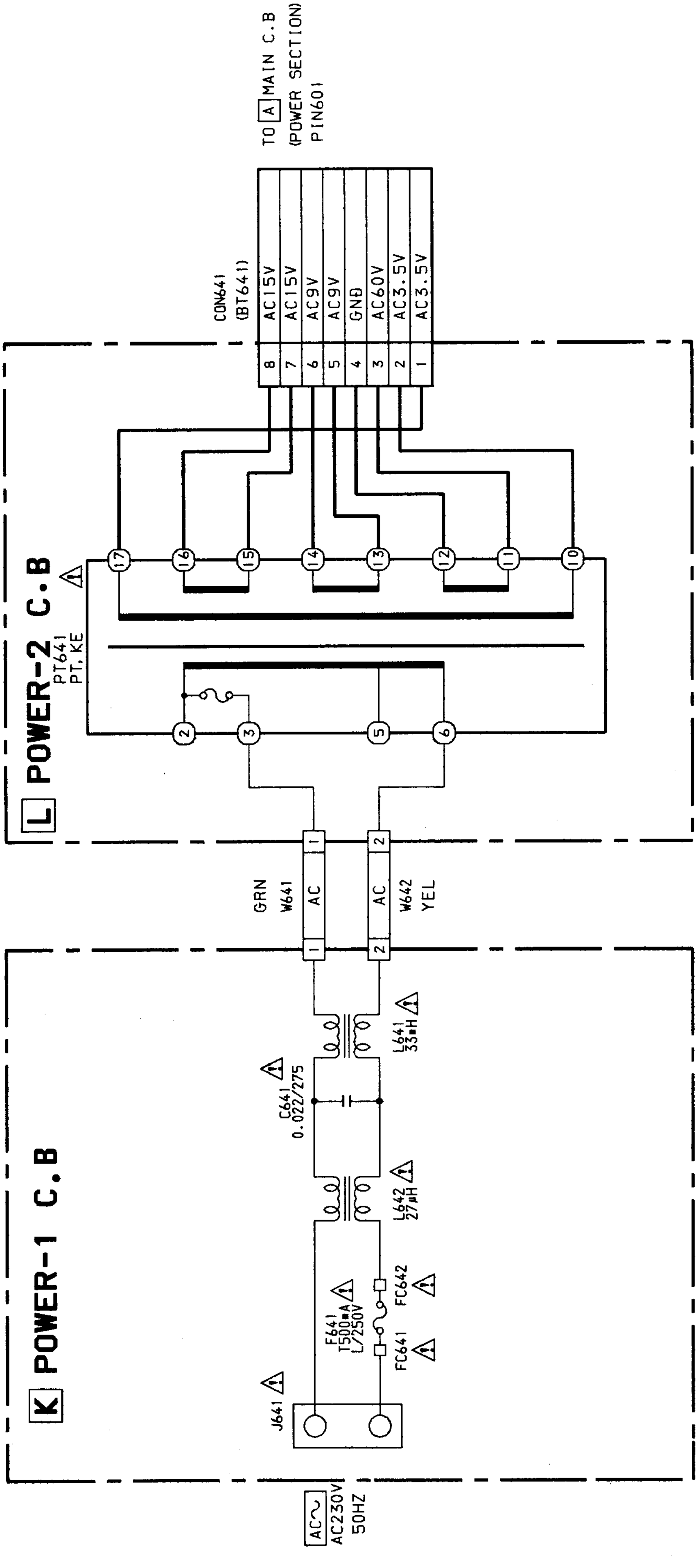
WIRING – 6 (MECHANISM SECTION)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
N BASE C.B
O CM C.B
P ĐM LEAĐ C.B
R VIĐEO OUT C.B
M2 CAPSTAN MOTOR
M1 ĐRUM MOTOR
MOĐE SW
CN3
CN2
CN5
1 2
YEL
BLU
M3 (LOADING MOTOR)
GRY
BLU
TO Q ACE HEAĐ C.B CN1
ACE HEAĐ
ACEH (AUĐIO/CTL/ERASE HEAĐ)
TO A MAIN C.B (SERVO/SYSTEM CONTROL SECTION) CN101
VHI (VIĐEO HEAĐ)
TO E HEAĐ AMP C.B CN502
PIN1
FROM A MAIN C.B BT702
RED
WHT
PIN701 M FE C.B
FEH (FULL ERASE HEAĐ)

SCHEMATIC DIAGRAM – 13 (MECHANISM SECTION)


FROM A MAIN C.B
(SERVO/SYSTEM CONTROL SCTION)
CN101
CN5
1 CTL HEAĐ (+)
2 CTL HEAĐ (-)
3 AUĐIO ERASE HEAĐ
4 AUĐIO ERASE HEAĐ <GNĐ>
5 AUĐIO HEAĐ <REC>
6 AUĐIO HEAĐ <PLAY>
7 LOAĐING MOTOR (-)
8 LOAĐING MOTOR (+)
9 CAPSTAN MOTOR CONTROL
10 CAPSTAN MOTOR VCC (+5V)
11 CAPSTAN MOTOR VCC
12 CAPSTAN MOTOR 1-LIMIT
13 CAPSTAN MOTOR REFFERENCE
14 CAPSTAN MOTOR FG OUT
15 CAPSTAN MOTOR GNĐ (MOTOR GNĐ)
16 CAPSTAN MOTOR GNĐ (IC GNĐ)
17 CAPSTAN MOTOR F̄/R
18 MOĐE SWITCH COMMON
19 MOĐE SWITCH MOĐE-1
20 MOĐE SWITCH MOĐE-2
21 MOĐE SWITCH MOĐE-3
22 MOĐE SWITCH MOĐE-4
23 ĐRUM MOTOR FG OUT
24 ĐRUM MOTOR GNĐ (FG/PG)
25 ĐURM MOTOR PG OUT
26 ĐRUM MOTOR VCC (+12V)
27 ĐRUM MOTOR CONTROL
28 ĐRUM MOTOR GNĐ (MOTOR GNĐ)
N BASE C.B
4BIT MOĐE SWITCH
SW1
SW2
SW3
SW4
PIN2
CN3
CN4
GRY
GRY
GRY
GRY
GRY
BLU
BLU
YEL
CN1
CN2
Q ACE HEAĐ C.B
ACEH
CTL HEAĐ
AUĐIO ERASE HEAĐ
AUĐIO REC/PB HEAĐ
AUĐIO/CTL/ERASE HEAĐ
M3 LOAĐING MOTOR
O CM C.B
M2 CAPSTAN MOTOR
P ĐM LEAĐ C.B
M1 ĐRUM MOTOR

SCHEMATIC DIAGRAM – 14 (POWER SECTION)


TO A MAIN C.B
(POWER SECTION)
PIN601
CON641
(BT641)
8 AC15V
7 AC15V
6 AC9V
5 AC9V
4 GND
3 AC60V
2 AC3.5V
1 AC3.5V
L POWER-2 C.B
PT641
PT,KE
17
16
15
14
13
12
11
10
2
3
5
6
GRN
W641
AC
AC
W642
YEL
1
2
K POWER-1 C.B
L641
33mH
C641
0.022/275
L642
27μH
F641
T500mA
L/250V
FC641
FC642
J641
AC~
AC230V
50HZ

WAVE FORM

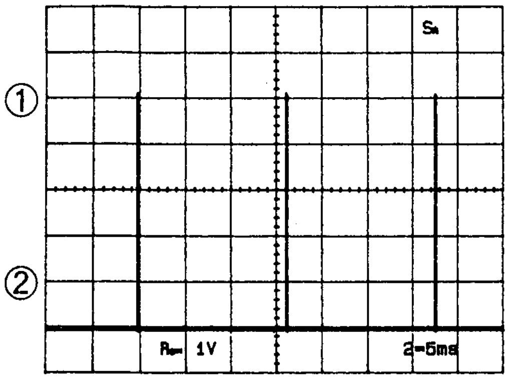
(VIDEO SECTION)

MODE : REC

INPUT : COLOR BAR

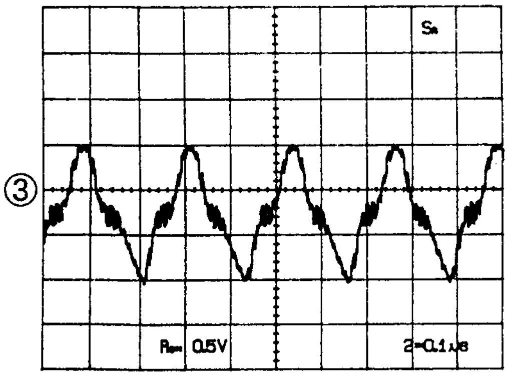
① IC301 Pin ⑭

② IC302 Pin ⑮



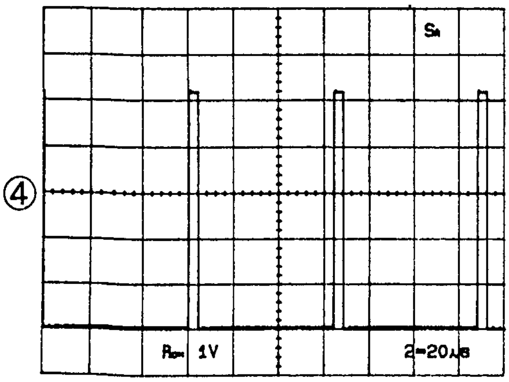
5ms/div.
1V/div.

③ IC301 Pin ⑩



0.1 µ s/div.
0.5V/div.

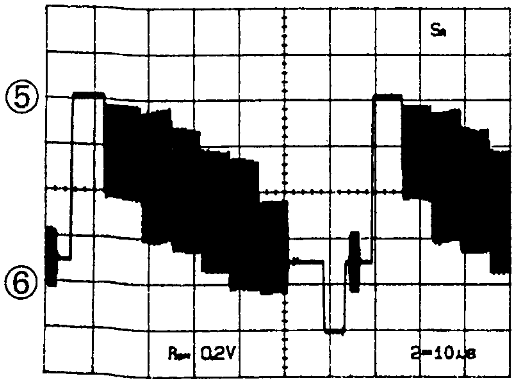
④ IC301 Pin ㉕



20 µ s/div.
1V/div.

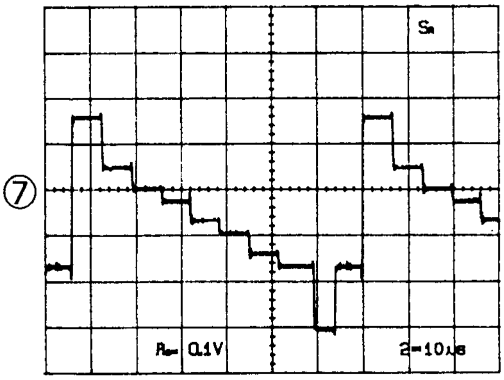
⑤ IC301 Pin ㉙

⑥ IC301 Pin ㉛



10 µ s/div.
0.2V/div.

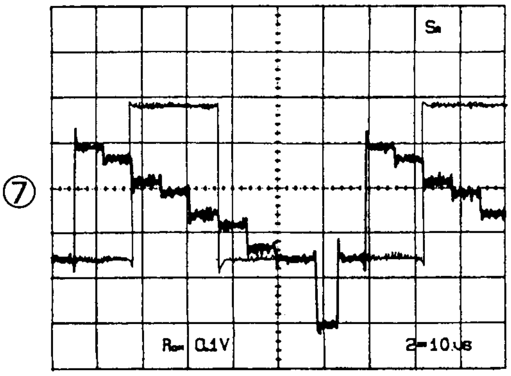
⑦ IC301 Pin ㊳



10 µ s/div.
0.1V/div.

MODE : PB

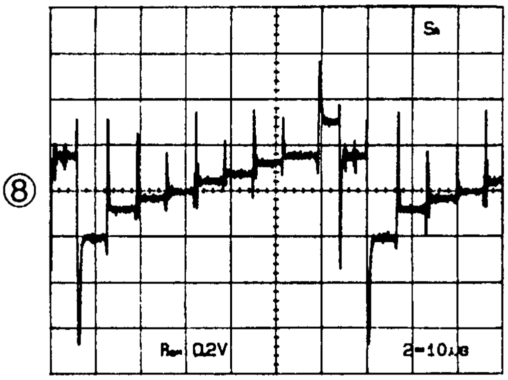
⑦ IC301 Pin ㊳



10µ s/div.
0.1V/div.

MODE : REC

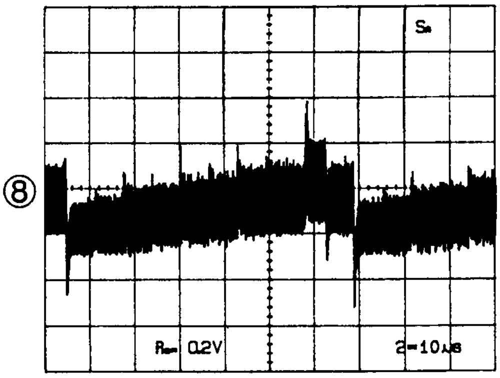
⑧ IC301 Pin ㊽



10µ s/div.
0.2V/div.

MODE : PB

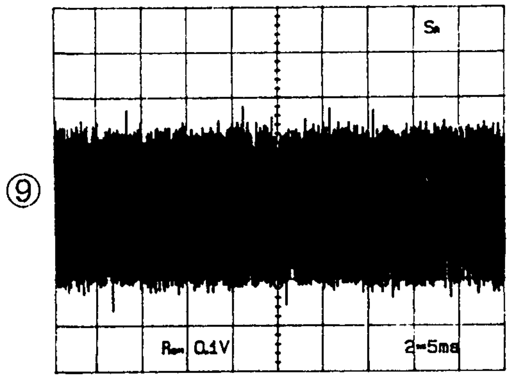
⑧ IC301 Pin ㊽



10µ s/div.
0.2V/div.

MODE : REC

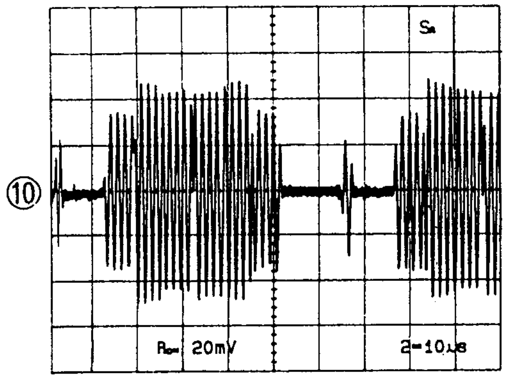
⑨ Q305 Emitter



5ms/div.
0.1V/div.

MODE : SP

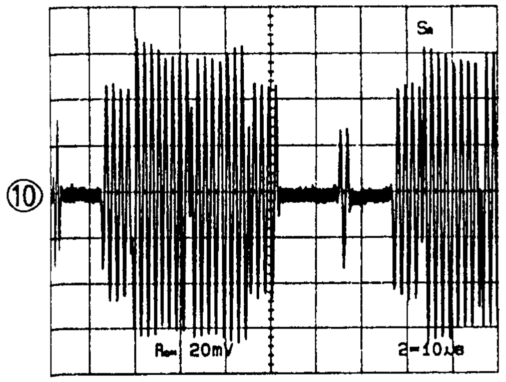
⑩ Q303 Emitter



10 μ s/div.
20mV/div.

MODE : LP

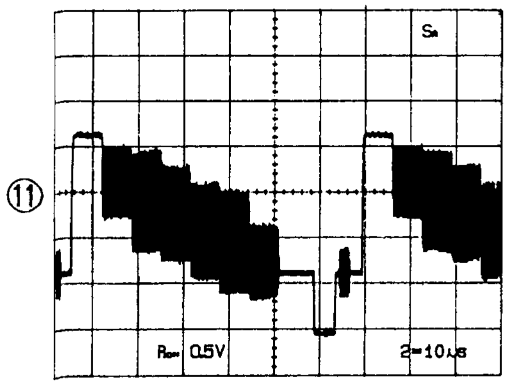
⑩ Q303 Emitter



10 μ s/div.
20mV/div.

MODE : LP

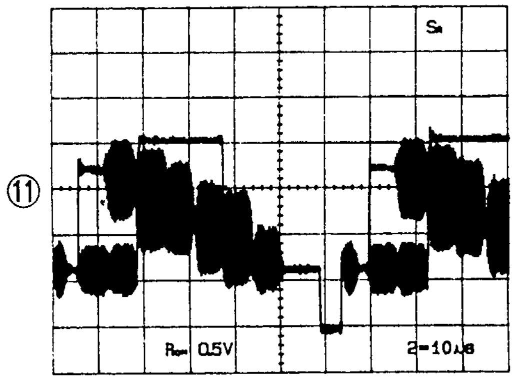
⑪ Q339 Emitter



10 μ s/div.
0.5V/div.

MODE : PB

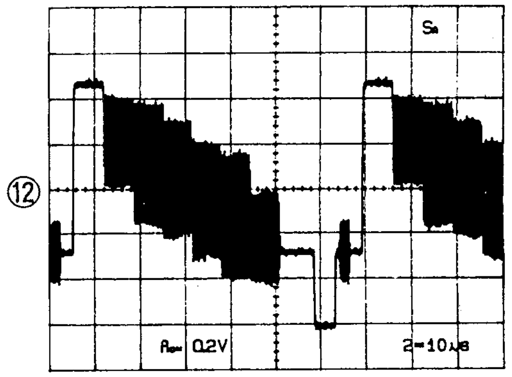
⑪ Q339 Emitter



10 μ s/div.
0.5V/div.

MODE : LP

⑫ Q340 Emitter

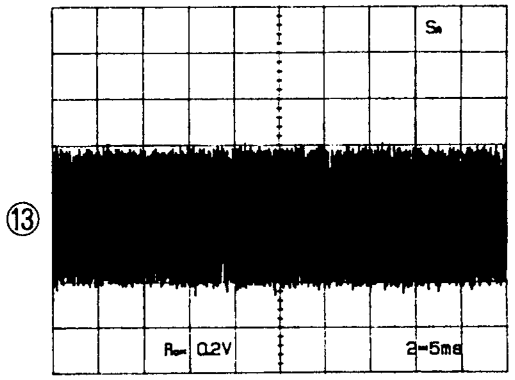


10 μ s/div.
0.2V/div.

MODE : PB

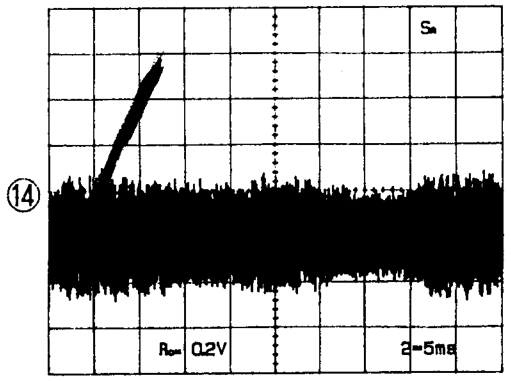
TEST TAPE : TTV – P1

⑬ Q317 Emitter



5ms/div.
0.2V/div.

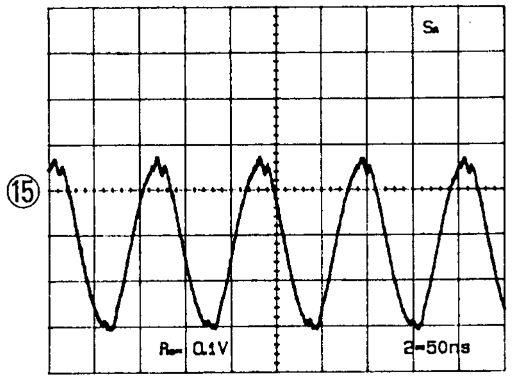
⑭ Q310 Emitter



5ms/div.
0.2V/div.

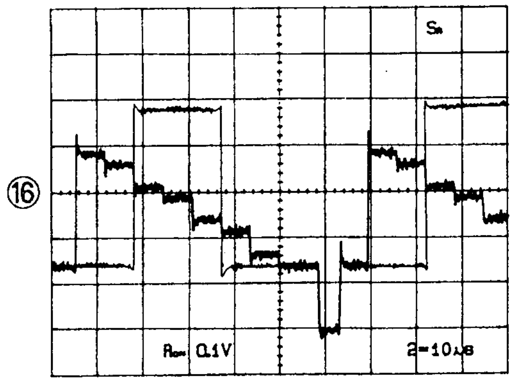
MODE : PB

⑮ IC302 Pin ⑪



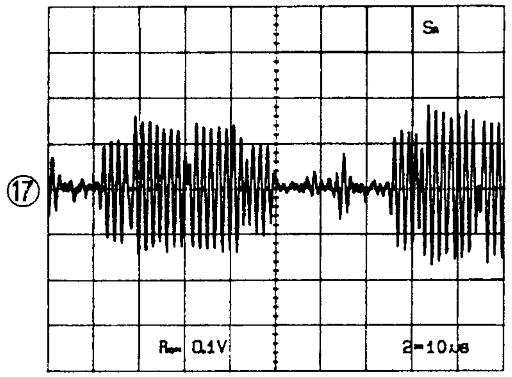
50ns/div.
0.1V/div.

⑯ IC301 Pin ㉟



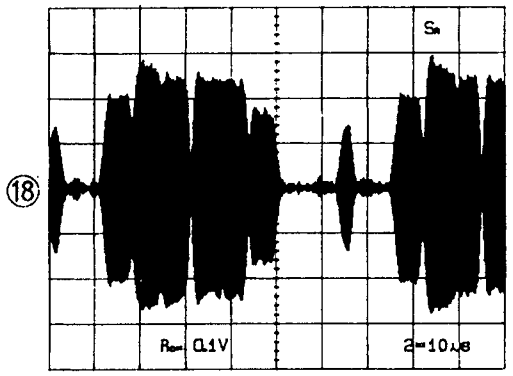
10 μ s/div.
0.1V/div.

⑰ IC301 Pin (56)



10 μ s/div.
0.1V/div.

⑱ IC301 Pin ⑲

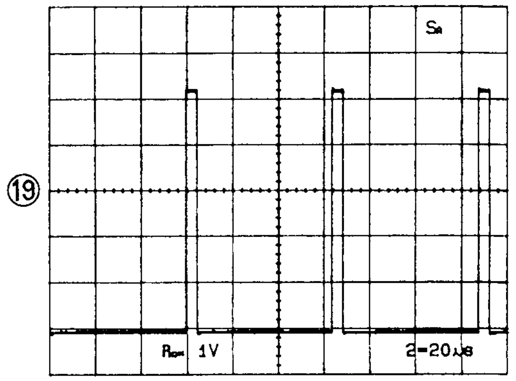


10 μ s/div.
0.1V/div.

OSD

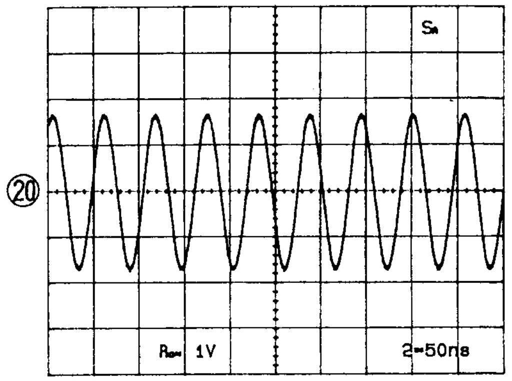
INPUT : COLOR BAR

⑲ IC303 Pin ④



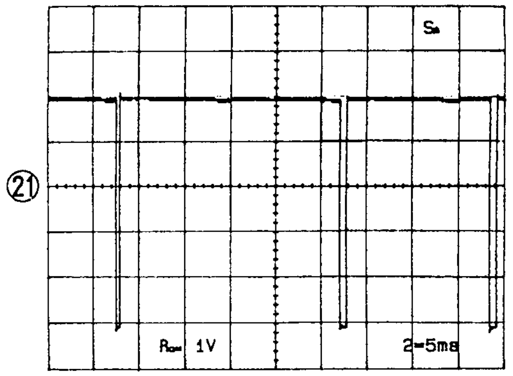
20 μ s/div.
1V/div.

⑳ IC303 Pin ⑥



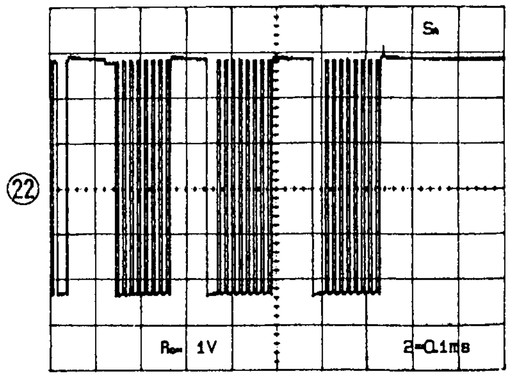
50ns/div.
1V/div.

㉑ IC303 Pin ⑧



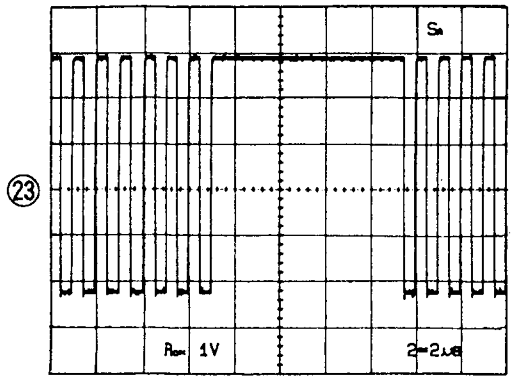
5ms/div.
1V/div.

㉒ IC303 Pin ⑨



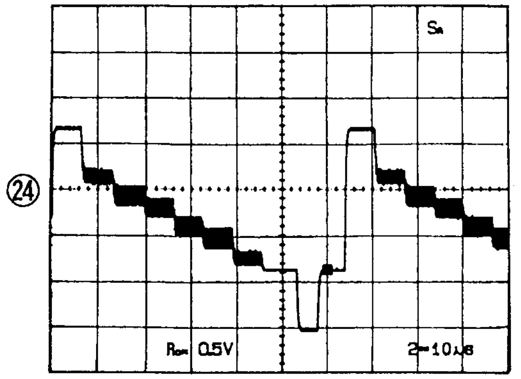
0.1ms/div.
1V/div.

㉓ IC303 Pin ⑩



2 µ s/div.
1V/div.

㉔ IC303 Pin ⑳

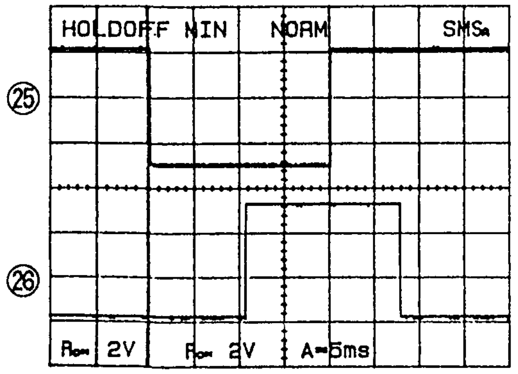


10 µ s/div.
0.5V/div.

(SS SECTION)

MODE : PB

TEST TAPE : TTV - P1
㉕ IC101 Pin (94) (HSW - V)
㉖ IC101 Pin ㉗ (CHECK : SERVICE MODE1/PUSH MENU/ SELECT "CTLP")

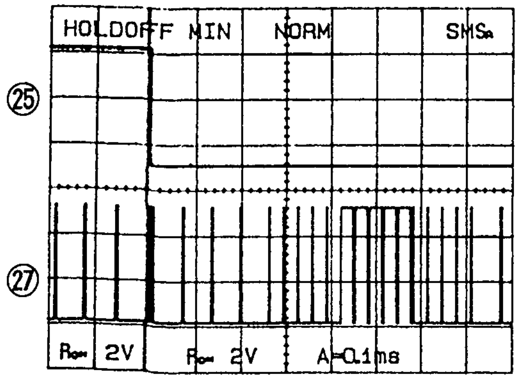


5ms/div.
2V/div.

5ms/div.
2V/div.

MODE : PB

TEST TAPE : TTV - P1
㉕ IC101 Pin (94) (HSW - V)
㉗ IC101 Pin (82) (C SYNC)

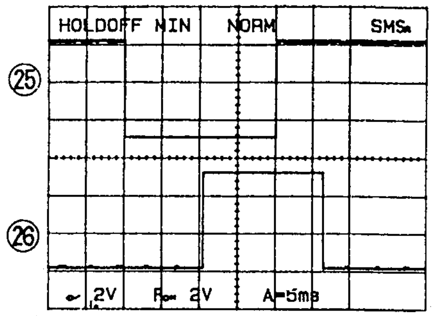


0.1ms/div.
2V/div.

0.1ms/div.
2V/div.

MODE : REC, SP INPUT : PAL

TEST TAPE : T - 120
㉕ IC101 Pin (94) (HSW - V)
㉖ IC101 Pin ㉗ (CHECK : SERVICE MODE1/PUSH MENU/ SELECT "CTLP")

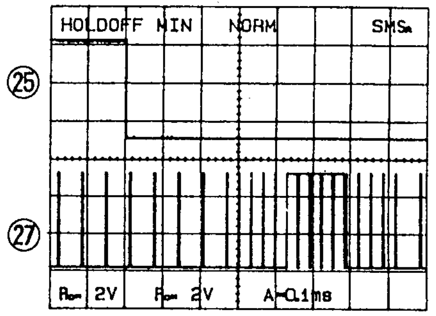


5ms/div.
2V/div.

5ms/div.
2V/div.

MODE : REC, SP INPUT : PAL

TEST TAPE : T - 120
㉕ IC101 Pin (94) (HSW - V)
㉗ IC101 Pin (82) (C SYNC)

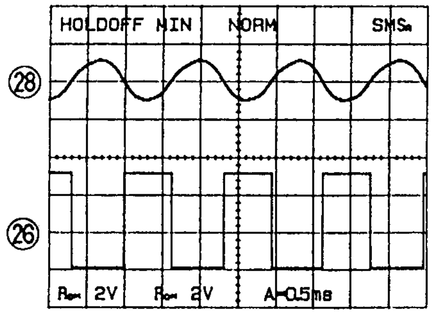


0.1ms/div.
2V/div.

0.1ms/div.
2V/div.

MODE : PB

TEST TAPE : TTV - P1
㉘ CN101 Pin ⑭ (CAP FG)
㉖ IC101 Pin ㉗ (CHECK : SERVICE MODE1/PUSH MENU/ SELECT "CFG")

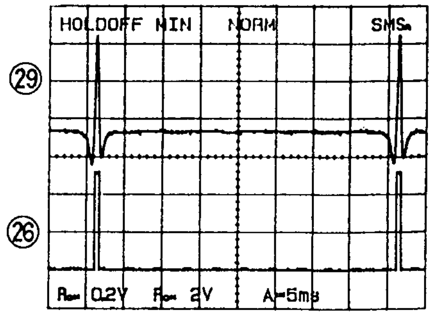


0.5ms/div.
2V/div.

0.5ms/div.
2V/div.

MODE : PB

TEST TAPE : TTV - P1
㉙ CN101 Pin ㉕ (DRUM PG)
㉖ IC101 Pin ㉗ (DRUM PG : SERVICE MODE1 / PUSH MENU/SELECT "DPG")

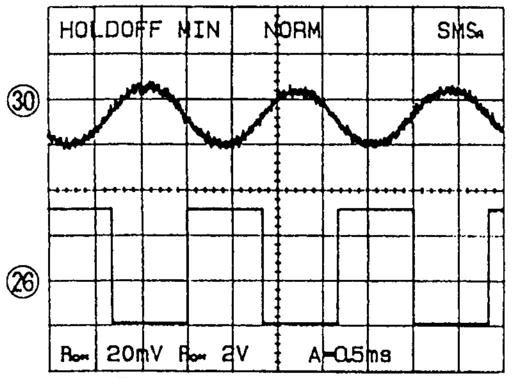


5ms/div.
0.2V/div.

5ms/div.
2V/div.

MODE : PB

TEST TAPE : TTV - P1
㉚ CN101 Pin ㉓ (DRUM FG)
㉖ IC101 Pin ㉗ (DRUM FG : SERVICE MODE1 / PUSH MENU/SELECT "DFG")

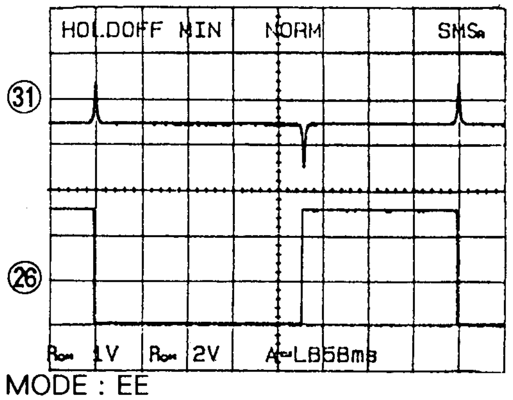


0.5ms/div.
20mV/div.

0.5ms/div.
2V/div.

MODE : P1

TEST TAPE : TTV - P1
㉛ IC101 Pin (71) (PB CTL)
㉖ IC101 Pin ㉗ (CHECK : SERVICE MODE1/PUSH MENU/ SELECT "CTLP")

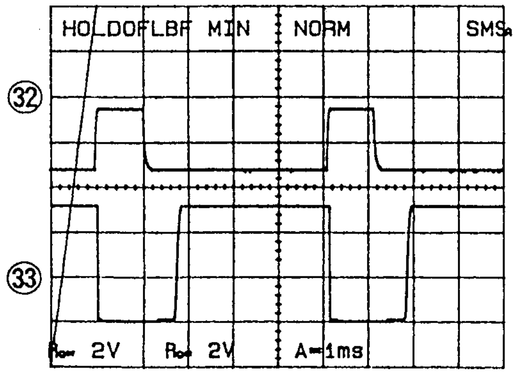


LB5Bms/div.
1V/div.

LB5Bms/div.
2V/div.

MODE : EE

㉜ Q104 BASE (TOP/END SENS LED)
㉝ IC101 Pin ⑮ (TOP-SENS)

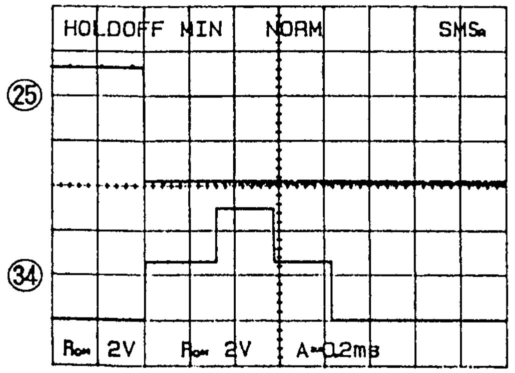


1ms/div.
2V/div.

1ms/div.
2V/div.

MODE : PAUSE

TEST TAPE : TTV - P1
㉕ IC101 Pin (94) (HSW - V)
㉞ IC101 Pin (98) (JOG VD)

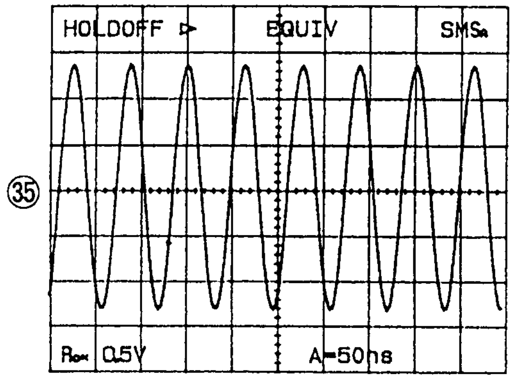


0.2ms/div.
2V/div.

0.2ms/div.
2V/div.

MODE : EE

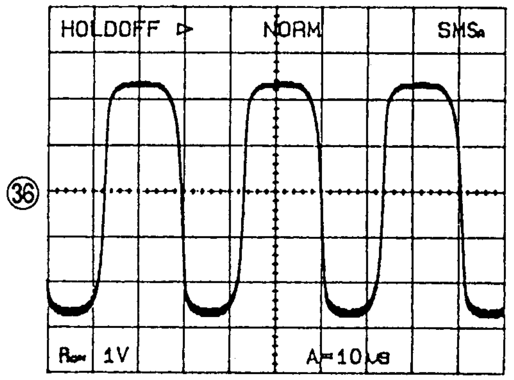
㉟ CHECK LAND 16M, IC101 Pin ㊷



50ns/div.
0.5V/div.

MODE : EE

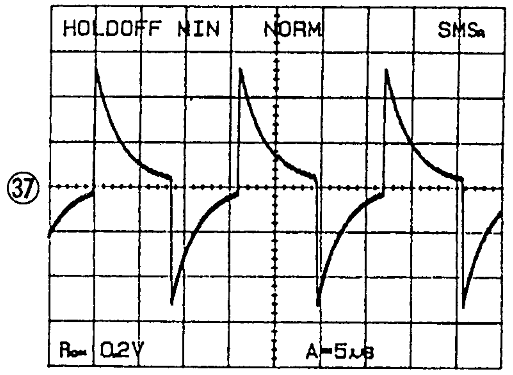
㊱ CHECK LAND 32K, IC101 Pin (87)



10 µ s/div.
1V/div.

MODE : PB

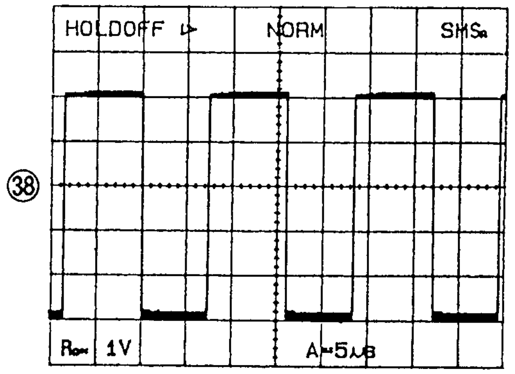
TEST TAPE : TTV - P1
㊲ IC101 Pin (79) (DRUM D/A)



5µ s/div.
0.2V/div.

MODE : PB

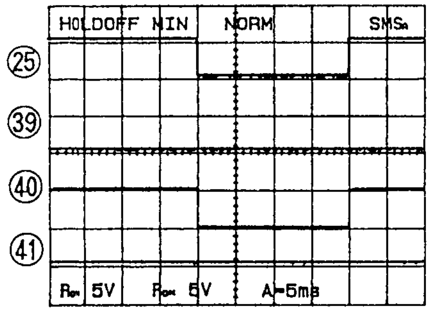
TEST TAPE : TTV - P1
㊳ IC101 Pin (78) (CAP PWM)



5µ s/div.
1V/div.

MODE : PB

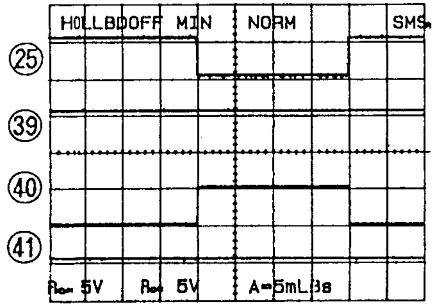
TEST TAPE : TTV-P1
㉕ IC101 Pin (94) (HSW – V)
㊴ IC101 Pin (92) (H SEL)
㊵ IC101 Pin (93) (C ROT)
㊶ IC101 Pin ㉒ (DENV)



5ms/div.
5V/div.
5ms/div.
5V/div.
5ms/div.
5V/div.
5ms/div.
5V/div.

MODE : PB

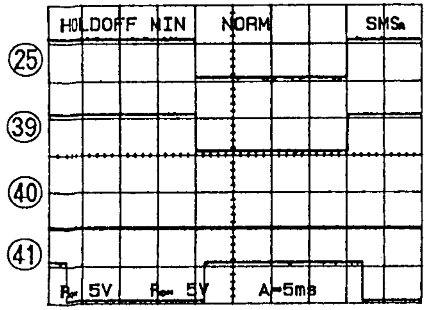
TEST TAPE : TTV-P1L
㉕ IC101 Pin (94) (HSW – V)
㊴ IC101 Pin (92) (H SEL)
㊵ IC101 Pin (93) (C ROT)
㊶ IC101 Pin ㉒ (DENV)



5mLBs/div.
5V/div.
5mLBs/div.
5V/div.
5mLBs/div.
5V/div.
5mLBs/div.
5V/div.

MODE : PAUSE

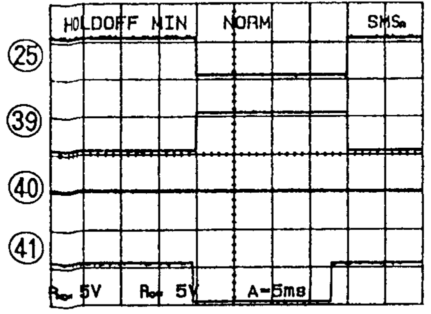
TEST TAPE : TTV-P1
㉕ IC101 Pin (94) (HSW – V)
㊴ IC101 Pin (92) (H SEL)
㊵ IC101 Pin (93) (C ROT)
㊶ IC101 Pin ㉒ (DENV)



5ms/div.
5V/div.
5ms/div.
5V/div.
5ms/div.
5V/div.
5ms/div.
5V/div.

MODE : PAUSE

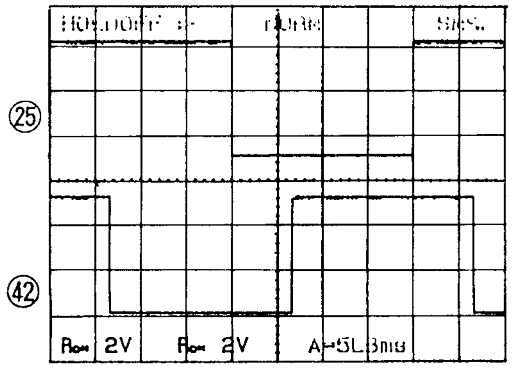
TEST TAPE : TTV-P1L
㉕ IC101 Pin (94) (HSW – V)
㊴ IC101 Pin (92) (H SEL)
㊵ IC101 Pin (93) (C ROT)
㊶ IC101 Pin ㉒ (DENV)



5ms/div.
5V/div.
5ms/div.
5V/div.
5ms/div.
5V/div.
5ms/div.
5V/div.

MODE : PB

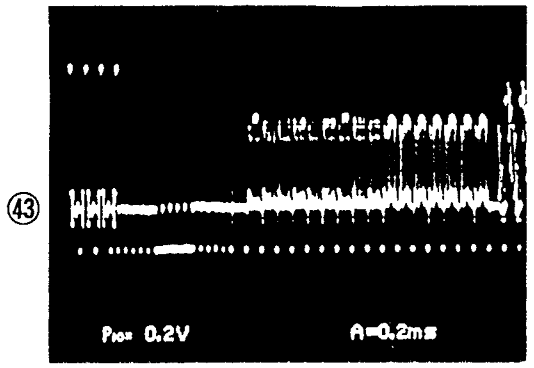
TEST TAPE : TTV – P7
㉕ IC101 Pin (94) (HSW – V)
㊷ IC101 Pin (95) (HSW – A)



5LBms/div.
2V/div.
5LBms/div.
2V/div.

MODE : RF (PDC SIGNAL) < HV-FX3500K/FX2500K >

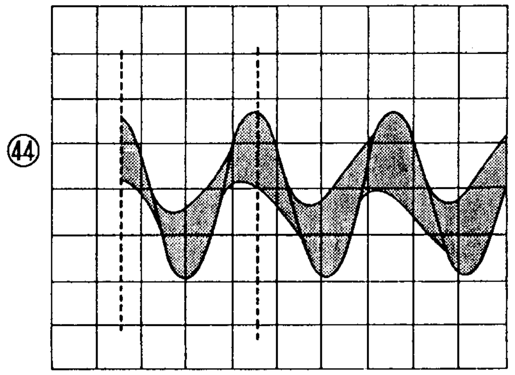
㊸ IC106 Pin ⑬ (CBVS)



0.2ms/div.
0.2V/div.

(TUNER SECTION) < HV-FX3500AE >

㊹ CN802 Pin ① (SIF)

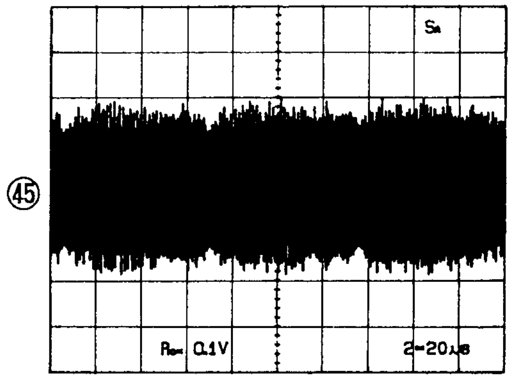


50ns/div.
0.1V/div.

(HEAD AMP SECTION)

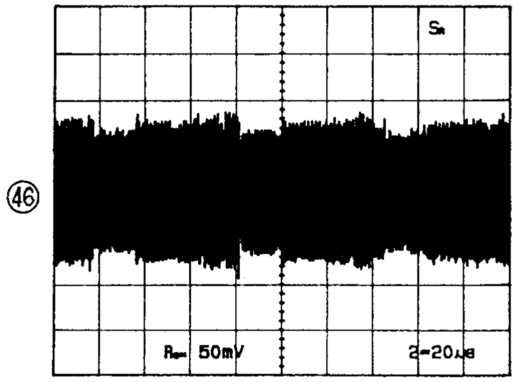
MODE : PB

TEST TAPE : TTV – P1 PLAY BACK
㊺ Q508 Emitter



20 µ s/div.
0.1V/div.

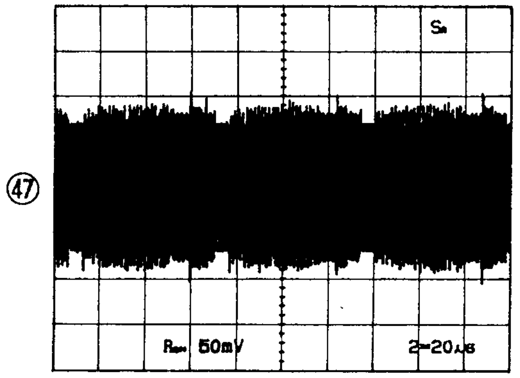
㊻ Q505 Emitter



20 µ s/div.
50mV/div.

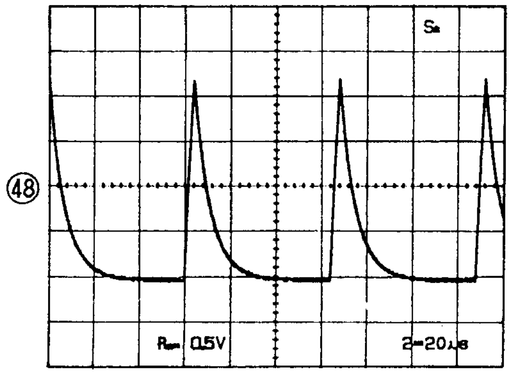
MODE : REC

INPUT : COLOR BAR
㊼ IC501 Pin ⑭



20 µ s/div.
50mV/div.

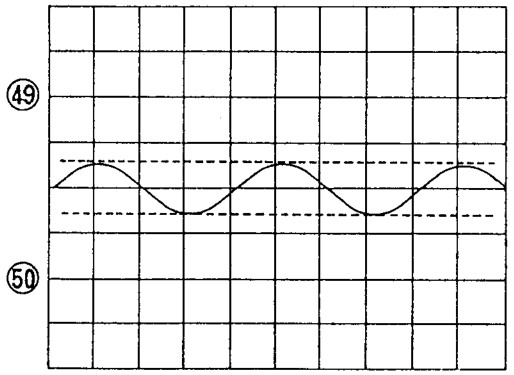
㊽ IC501 Pin ⑰



20 µ s/div.
0.5V/div.

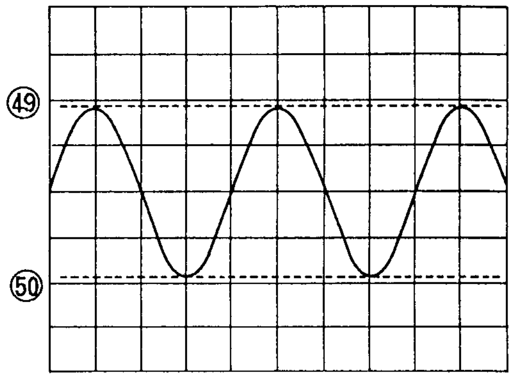
CANAL SECTION

㊾ 21-OUT-L (NORMAL, GAIN ≒ 0dB)
㊿ 21-OUT-R



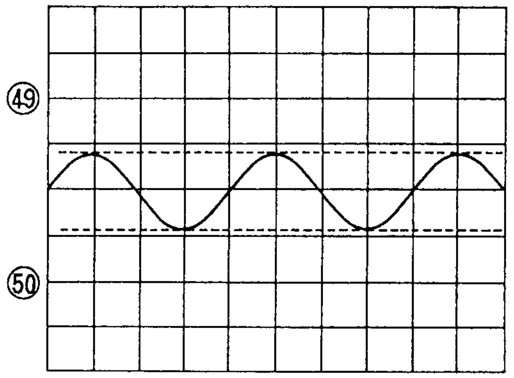
5ms/div.
2V/div.

㊾ 21-OUT-L (DINAMIC MODE, GAIN ≒ 13dB)
㊿ 21-OUT-R



5ms/div.
2V/div.

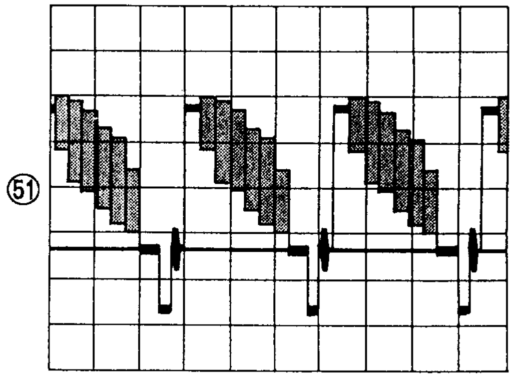
㊾ 21-OUT-L (MIDNIGHT MODE, GAIN ≒ 55dB)
㊿ 21-OUT-R



5ms/div.
2V/div.

MODE : TU1

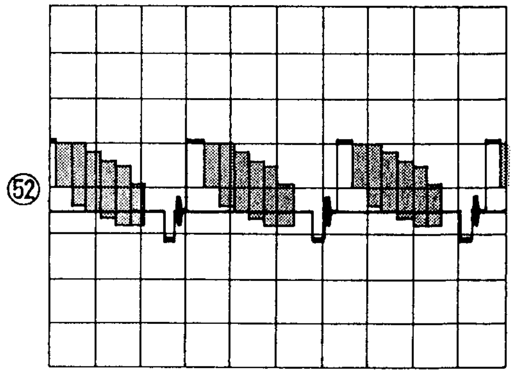
(51) CN1 Pin ① (V OUT)



20 µ s/div.
0.5V/div.

MODE : STANDBY, P ON

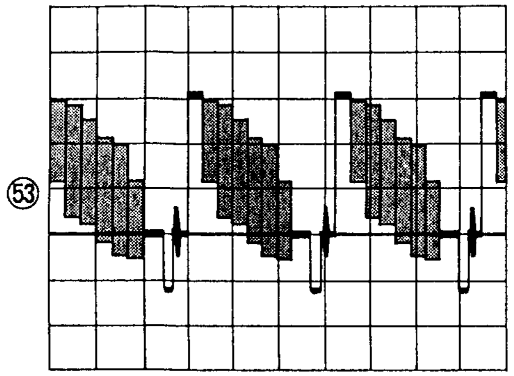
(52) CN2 Pin ⑳ (VIDEO IN)



20 µ s/div.
0.5V/div.

MODE : OPEN (NO CONNECT)

(53) CN3 Pin ⑲ (VIDEO OUT)

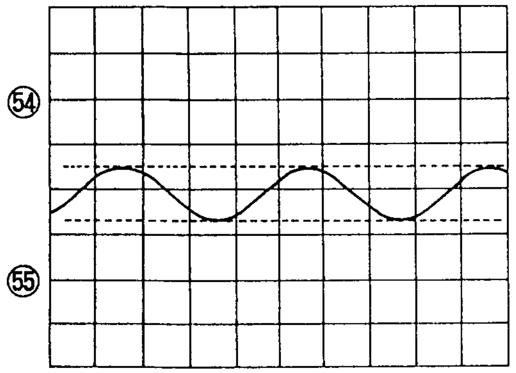


20 μ s/div.
0.5V/div.

< HV-FX3500K, AE >

MODE : PB (AUDIO 50Hz, AUDIO LEVEL −20dBm

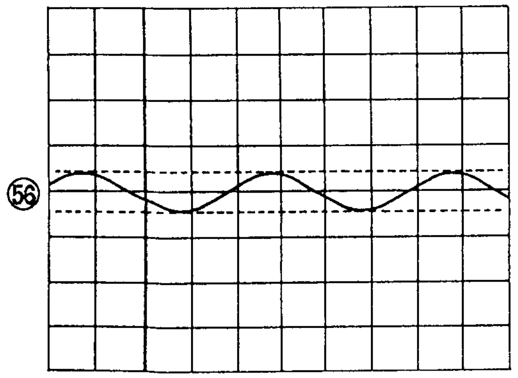
(54) HiFi L (50Hz −20dBm)
(55) HiFi R



5ms/div.
2V/div.

< HV-FX3500K, AE >

(56) RF A (MODE NORMAL)

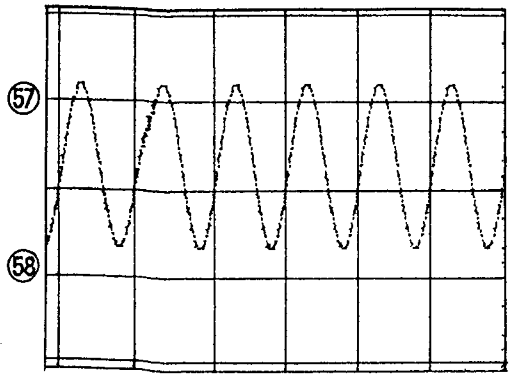


5ms/div.
2V/div.

(HiFi SECTION)

MODE : STEREO

TEST TAPE : P7 PLAY BACK
(57) IC701 Pin ㉑
(58) IC701 Pin ㉒

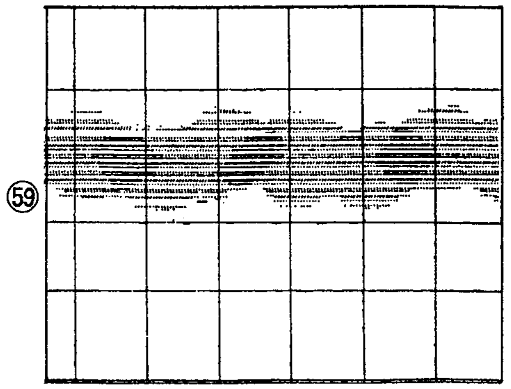


1ms/div.
500mV/div.

1ms/div.
500mV/div.

MODE : REC SP (NO SIGNAL)

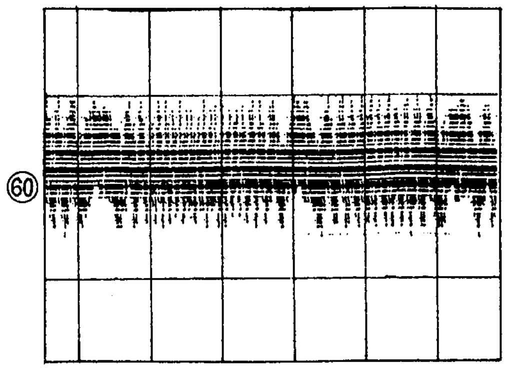
(59) IC701 Pin (56)



500 μ s/div.
500mV/div.

MODE : PB

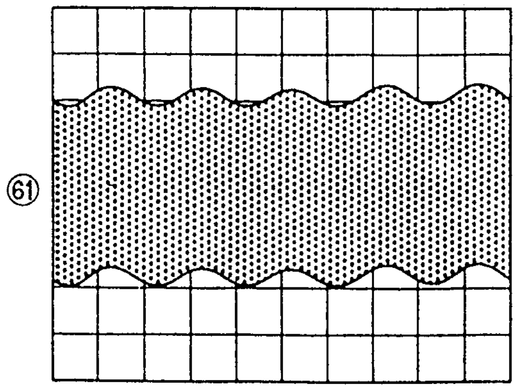
TEST TAPE : P7
(60) IC701 Pin (57)



200 μ s/div.
500mV/div.

MODE : REC SP

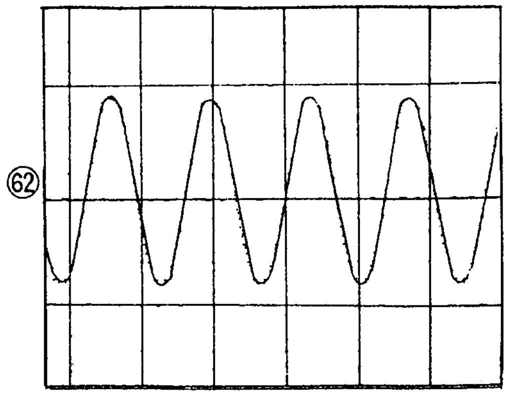
INPUT : 1kHz/−8dBs
(61) CN701 Pin ②



0.5ms/div.
20mV/div.

MODE : REC SP (NO SIGNAL)

(62) BT702 Pin ②

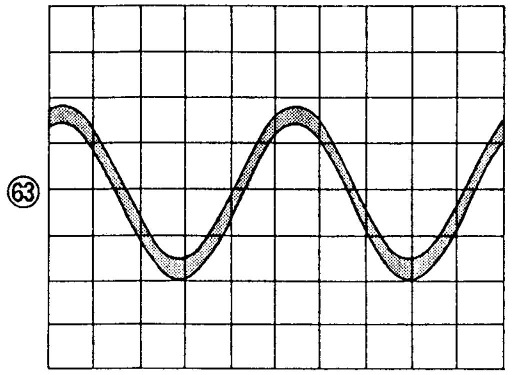


10 μ s/div.
20V/div.

(NICAM SECTION)

< HV-FX3500K/FX2500K >

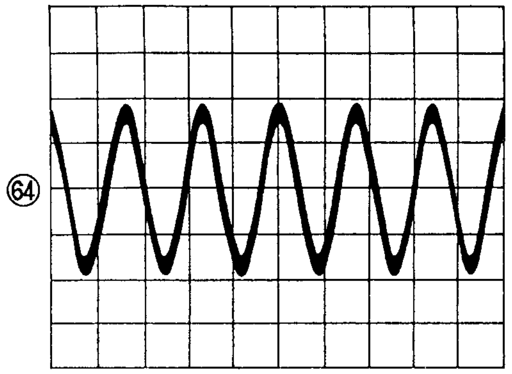
(63) IC651 Pin ⑧ (OUTPUT Rch)



0.2ms/div.
0.2V/div.

< HV-FX3500K/FX2500K >

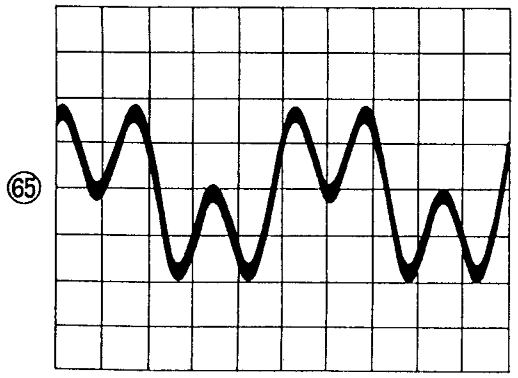
(64) IC651 Pin ⑮ (OUTPUT Lch, 3kHz)



0.2ms/div.
0.2V/div.

< HV-FX3500K/FX2500K >

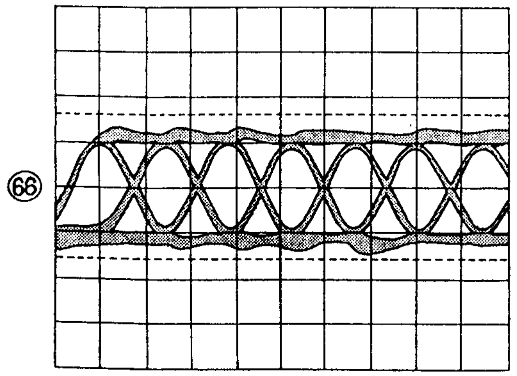
(65) IC651 Pin ⑯ (From TUNER PACK MONORAL SIGNAL,
Rch : 1kHz, Lch, 3kHz)



0.2ms/div.
0.2V/div.

< HV-FX3500K/FX2500K >

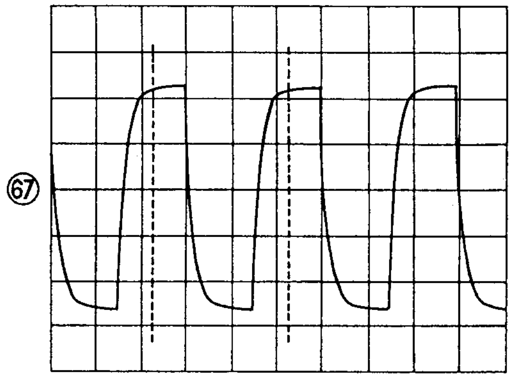
(66) IC651 Pin ㉒



2 μ s/div.
0.5V/div.

< HV-FX3500K/FX2500K >

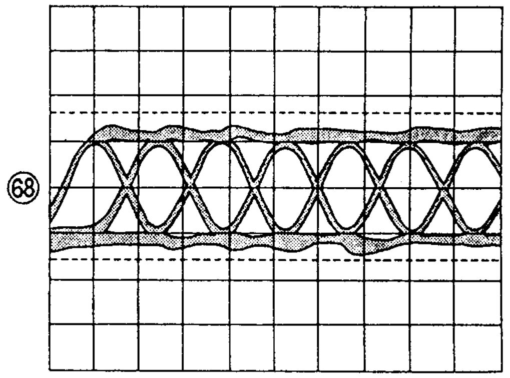
(67) IC651 Pin ㉕ (I PAL)



50ns/div.
1V/div.

< HV-FX3500K/FX2500K >

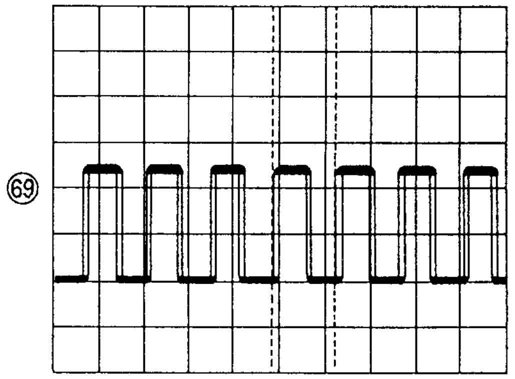
(68) IC651 Pin ㉛



2 μ s/div.
0.5V/div.

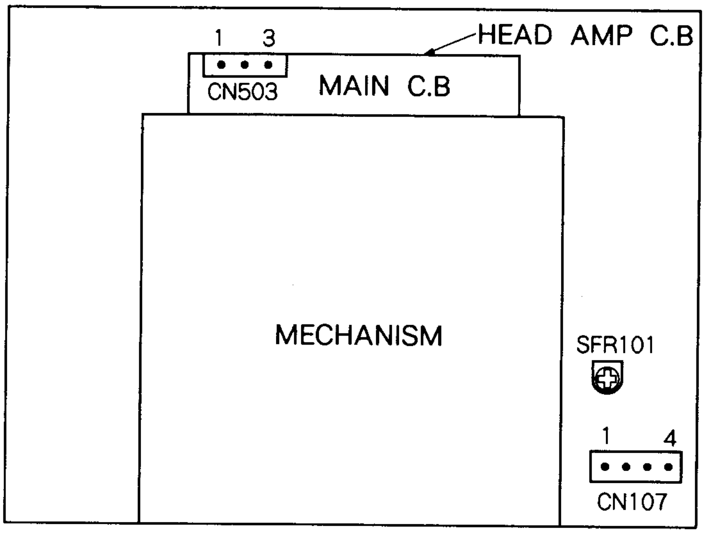
< HV-FX3500K/FX2500K >

(69) IC651 Pin ㊺



1 μ s/div.
2V/div.

ADJUSTMENT


1 3
HEAD AMP C.B
CN503
MAIN C.B
MECHANISM
SFR101
1 4
CN107

Front View

CN503
1 2 3

PIN NO.
1 PB RF
2 GND
3 SWP

CN107
1 2 3 4

PIN NO.
1 HSW V
2 C SYNC
3 TRRST
4 SS GND

1. Switching Position Adjustment

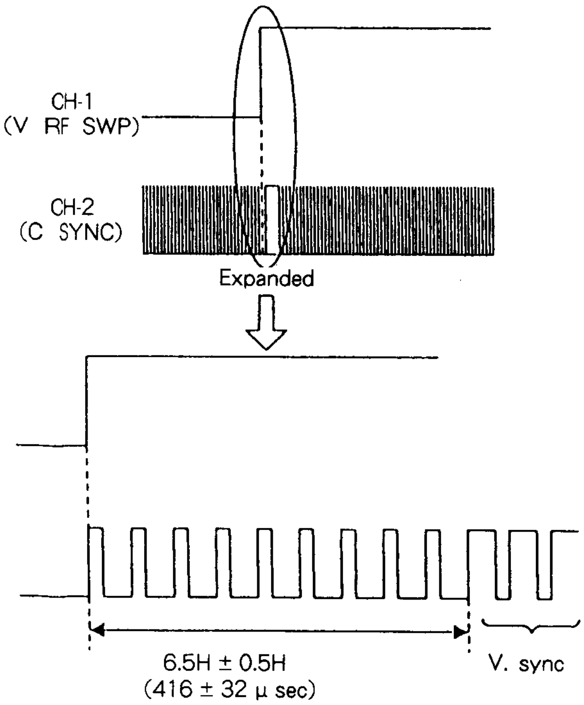
MODE : PB CH-2 (2) or TTV-P1

Osciloscope : CH-1 : CN107 (C SYNC)
CH-2 : CN107 (HSW V)

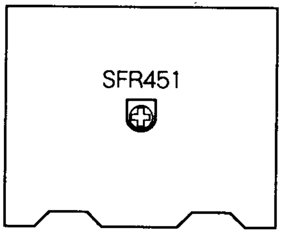
Adjustment Method

(1) Set the tracking to the center.
※Short TRRST of CN107 to GND.

(2) Adjust SFR101 so the observed waveforms are as shown in the diagram below.


CH-1
(V RF SWP)
CH-2
(C SYNC)
Expanded
6.5H ± 0.5H
(416 ± 32 μ sec)
V. sync

(3) Release the short-circuit between TRRST and GND.



ZWEITON C.B

2. Channel Separation Adjustment

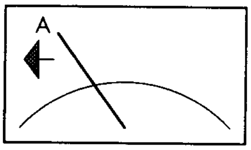
MODE : EE

Signal generator : PAL color bar
fp : 471.25 MHz (UHF)
Level : 60 dB μ
System : B/G
PDC data : off

[ZWEITON sound]
1ch : No signal
2ch : 1 kHz

Adjutment Method :

(1) Audio output (Lch)
Audio monitor : STEREO
22 k Ω terminated



(PM5418 TDS1) TV
Signal generator voltmeter

(2) Adjust SFR451 so that the voltmeter reads − 40 dBm.

SERVICE MODE

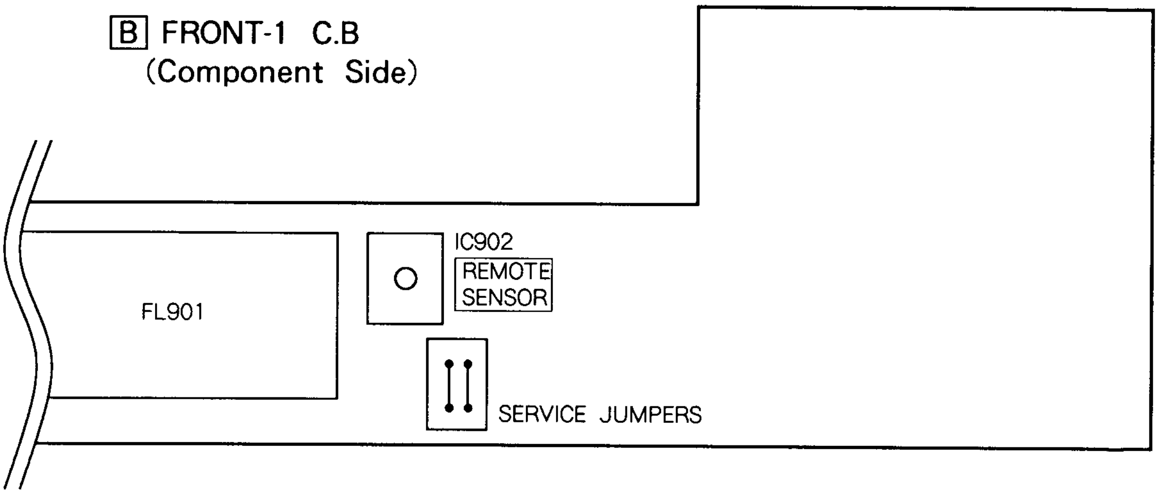
(1) Starting the Service Mode

Short the service jumpers on the front C. B. to start the service mode. Each time it is shorted, the mode changes as follows.

Service Mode 1→2→3→4→5→Normal Mode (K Model)
Service Mode 1→2→3→Normal Mode (AE Model)
Causion : The above method cannot be used unless communications between the IC on the front C.B. and the microprocessor are normal.

(2) Releasing the Service Mode

If the mode switching operation is performed after starting, the normal mode is enterd after mode 5 or mode 3 (the service mode is released). The service mode is also released when the power cord is unplugged from the AC outlet and is plugged in again.

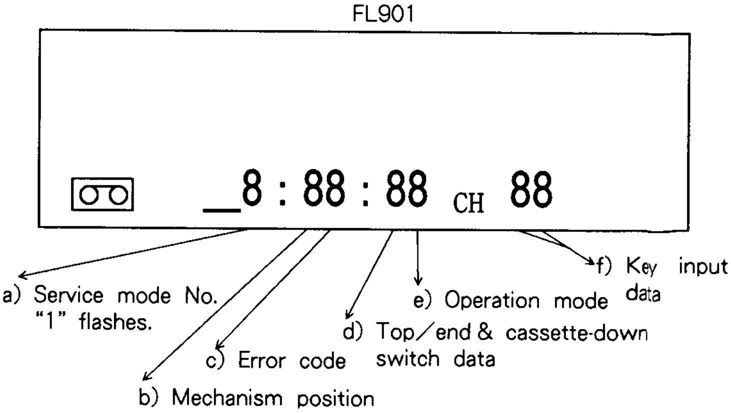

B FRONT-1 C.B
(Component Side)
FL901
IC902
REMOTE SENSOR
SERVICE JUMPERS

(3) Overview

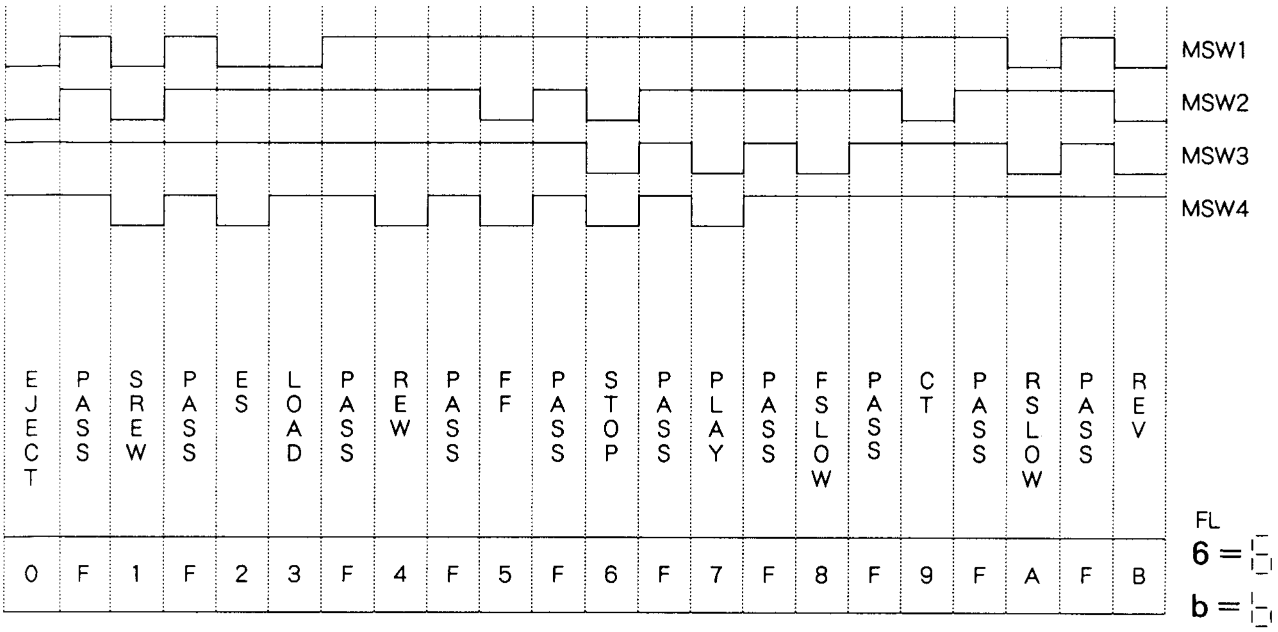
①Service Mode 1

The following data is displayed in the FL display (FL901).

a) Service mode No.
b) Mechanism position
c) Error code
d) Top/end sensor & CST SW data
e) Operation mode
f) Key/remote control input data


FL901
_8 : 88 : 88 CH 88
a) Service mode No. "1" flashes.
b) Mechanism position
c) Error code
d) Top/end & cassette-down switch data
e) Operation mode
f) Key input data

b) Mechnism position



EJECT	PASS	SREW	PASS	ES	LOAD	PASS	REW	PASS	FF	PASS	STOP	PASS	PLAY	PASS	FSLOW	PASS	CT	PASS	RSLOW	PASS	REV
0	F	1	F	2	3	F	4	F	5	F	6	F	7	F	8	F	9	F	A	F	B

c) Error code

Error code	Details	State
0	Normal	
1	Cassette loading error	Id CST SW : L→H cannot be detected within 6 seconds after cassette-in is detected.
2	Cassette eject error	If CST SW : H→L cannot be detected within 3 seconds after eject is started or if cassette-out cannot be detected (top sensor) within 6 seconds after CST SW
3	Sledding error	If transfer to the subsequent operation position cannot be done within 6 seconds after sledding is started.
4	Unsledding error	If transfer to the subsequent operating position cannot be done within 6 seconds after unsledding is started.
5	Leader processing error	If the processing of the leaders at the tape top/end is not finished within 6 seconds.
6	T reel sensor	If no T reel pulse is detected for more than 8 seconds when the tape is running.
7	S reel sensor	If no S reel pulse is detected for more than 8 seconds when the tape is running.
8	Drum error	If no DFG pulse is detected for more than 5 seconds when the tape is running.
9	Protect error	If PRT-L is detected for more than 1 second when the power is turned on.
A	Mechanism state error	Error caused by the mechanism position switch (Normal : 1→F→3)
B	Capstan error	If no CFG pulse is detected for more than 2 seconds when the capstan is rotating. However, it is ignored during eject.

d) Top/end sensor & CST SW data

bit	Details of data	
1	End sensor	Bit = 1 when leader is detected (ON)
2	Top sensor	Bit = 1 when sensor is detected (ON)
3	CST SW	Bit = 1 when SW (L) is detected

Example : "6" is displayed during eject
Bit 3 2 1
1 1 0 = 6
End sensor OFF
Top sensor ON
CST SW = L

e) Operation mode

0	Power on (with tape)
1	Power on (withot tape)
2	Stop (Drum rotating)
3	FF
4	REW
5	PLAY
6	CUE
7	REVIEW

8	Still/Slow
9	REC
A	REC PAUSE
b	Power off (without tape)
C	Power off (with tape)
d	Reverse play
E	Reverse slow/still

f) Key codes

00	POWER	10	---	20	0	30	THEATER
01	EJECT	11	---	21	1	31	MENU
02	STOP	12	ATR	22	2	32	NEXT ▶
03	FF	13	(+)	23	3	33	BACK ◀
04	REW	14	(-)	24	4	34	CLEAR
05	PLAY	15	< TRK. CENTER >	25	5	35	DISPLAY
06	REC	16	VIDEO PLUS	26	6	36	CH NO
07	PAUSE/STILL	17	---	27	7	37	CLOCK SET
08	JOG	18	D WLY	28	8	38	AUTO SET
09	V. FWD ≫	19	ADD. T	29	9	39	OK
0A	V.RVS ≪	1A	PDC	2A	CH UP ⊼	3A	CUR UP ▲
0B	OTPB	1B	---	2B	CH DOWN ⊻	3B	CUR DOWN ▼
0C	SP/LP	1C	AMON	2C	TV/VCR	3C	---
0D	C-RESET	1D	---	2D	INPUT	3D	---
0E	C-MEMO	1E	INDEX (+) ▶▶|	2E	GUIDE	3E	---
0F	---	1F	INDEX (-) |◀◀	2F	SERVICE	3F	---

Since the displayed codes are the intermediate codes when the microprocessor is operating, the numerals do not show the actual remote control codes. If the operations are different when the same keys are pressed, the displayed codes may be different.

Example) Shuttle ring on the VCR ; In STOP it is a transfer to FF/REW keys.

Since it is a special effects playback command during still/play, JOG (08) is displayed.

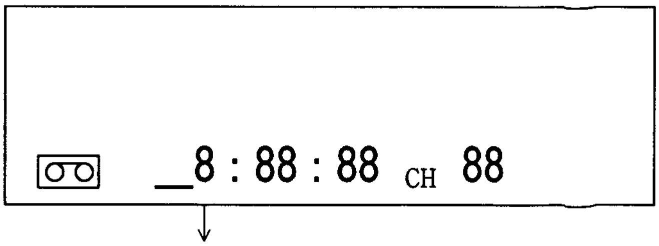
② Service Mode 2

The following data is ignored.

a) Top/end data (apart from when the cassette is being inserted and ejected)

b) Reel data

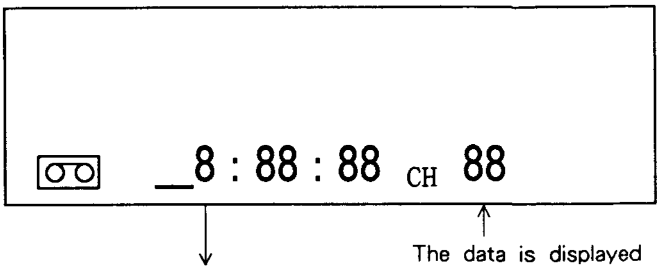
This mode is used when a summy tape is running.



Service Mode No. "2" flashes

③ Service Mode 3

The clock is advanced at 60 times the normal speed. When this mode is used to check timer recording, the data on secondsis ignored, so this mode should be left one minute before thetimer recording.



Service Mode No. "3" flashes.

The data is displayed during power off.

④ Service Mode 4

The PDC signal superimposed on the picture currently being received is displayed in this mode.

This mode is used to check the characteristics of the PDC signal which is currently being received.

If a PDC signal is included, a number is displayed, and if no PDC signal is present, the previous data is held or a bar is displayed.

```
PDC DATA

CN1    2F
PIL    25 SEP 18 : 30
PRF    0
LUF    0
LCI    0
```

Signal name	Description	Use
CN1	Country code, network code	Codes which identify the country from which a program is broadcast and the broadcast station.
PIL	Program identification label	Code which controls the time of program (day, month, hour, minute)
PRF	Record flag	Code which controls the recording start/end.
LUF	Update flag	Code which updates the data in the VCR when the schedule of recording is later across the date line.
LCI	Label channel	Code which identifies the programs when they are overlapped.

⑤ Service Mode 5

The UDT signal superimposed on the picture being currently received is displayed in this mode.

This mode is used to check the characteristics of the UDT signal which is currently being received.

```
UDT DATA

NIC    5FF6
MJD    E4・88・41
UTC    8 : 56 : 32
TOC    00
PWM    89AB
AGC    8B
```

Signal name	Description
NIC	Country identification code
MJD	Value obtained by processing Greenwich Mean Time using a microprocessor. As this is encoded, thetime cannot be found from it.
UTC	Time for which the signal is transmitted.
TOC	Time difference from the standard time
PWM	The approximate frequency of the tuned station can be found from this value.
AGC	The approximate signal strength of the station can be found from this value.

If a UDT signal is included in these signals, a number is displayed, and if no UDT signal is present, the previous data is held or a bar is displayed.

IC DESCRIPTION

IC, TDA9840

Pin No.	Pin Name	I/O	Description
1	SDA	I/O	I^2C-bus data input/output
2	CAGC	–	AGC capacitor of pilot frequency amplifier
3	CLP	–	Identification low-pass capacitor
4	CDCL	–	DC loop capacitor
5	Vipil	I	Pilot frequency input voltage
6	Cref	–	Capacitor of reference voltage (1/2Vp)
7	Vi1	I	AF input signal Vi1 (from 1st sound carrier)
8	Vi2	I	AF input signal Vi2 (from 2nd sound carrier)
9	Vi3	I	AF input signal Vi3 (NICAM or AM sound (standard L))
10	Vi4	I	AF input signal Vi4(NICAM)
11	Vo4	O	AF output signal Vo4 (SCART)
12	Vo3	O	AF output signal Vo3 (SCART)
13	Vo2	O	AF output signal Vo2 (main)
14	Vo1	O	AF output signal Vo1(main)
15	CD1	–	50 μ s de-emphasis capacitor of AF Channel 1
16	GND	–	Ground (0V)
17	CD2	–	50 μ s de-emphasis capacitor of AF Channel 2
18	Vp	I	Supply voltage (+5 to +8V)
19	XTAL	I	10 MHz crystal input
20	SCL	I	I^2C-bus clock input

IC, LC74763M

Pin No.	Pin Name	I/O	Description
1	VSS	–	Connected to ground.
2	Xtal IN1	I	For the connection of a crystal oscillator and capacitors composing the crystal oscillator circuit which generates internal sync signals. The crystal oscillator circuit is selected by command.
3	Xtal OUT1	O	
4	HSTYCOUT	O	Outputs a horizontal sync signal (AFC). The output polarity can be selected. (Metal option) Alternatively, a general-purpose port output (switched by command).
5	Xtal IN2	I	For the connection of a crystal oscillator and capacitors composing the crystal oscillator circuit which generates internal sync signals.
6	XtalOUT2	O	
7	VSYNCOUT	O	Outputs a vertical sync signal. The output polarity can be selected. (Metal option) Alternatively, a general-purpose port output (switched by command).
8	$\overline{\text{CS}}$	I	Input to enable serial data input. "L" input enables serial data input (hysteresis input). A pull-up resistor is incorporated. (Metal option)
9	SIN	I	Serial data input (hysteresis input). A pull-up resistor is incorporated. (Metal option)
10	SCLK	I	A clock signal is input to receive the serial data (hysteresis input). A pull-up resistor is incorporated. (Metal option)
11	SECAM	I	The input controls the SECAM mode switching. "L" : Modes other than SECAM, "H" : SECAM mode. General-purpose port output or internal V output (switched by command)
12	$\overline{\text{525}}$/625	I/O	The input switches between 525 and 625 scanning lines. "L" : 525 lines, "H" : 625 lines. General-purpose port output or character data output (switched by command).
13	$\overline{\text{NTSC}}$/PAL	I/O	The input switches the color system between NTSC and PAL. "L " : NTSC, "H" : PAL. General-purpose port output or character data output (switched by command).
14	$\overline{\text{3.58}}$/4.43	I/O	The input switches FSC between 3.58 MHz and 4.43 MHz. "L" : 3.58 MHz, "H" : 4.43 MHz. General-purpose port output or halftone output (switched by command).
15	$\overline{\text{RST}}$	I	System reset input (active "L"). (Hysteresis input) A pull-up resistor is incorporated. (Metal option)
16	C VOUT	O	Composite video signal output
17	VDD2	–	Power supply which creates the level of the composite video signal.
18	CVIN	I	Composite video signal input
19	CVCR	I	SECAM chroma signal input
20	SYNCIN	I	Video signal input of the internal sync separator
21	SEPC	O	Bias output of the internal sync separator
22	VSS	–	Ground
23	P DOUT	O	AFC control voltage input
24	AMPIN	I	For the connection of a filter of the AFC circuit
25	AMPOUT	O	
26	FC	I	AFC control voltage input
27	VCOIN	I	For the connection of a coil and capacitors which compose an LC oscillator for the VCO.
28	VCOOUT	O	
29	SYNCDET	O	EX-NOR output of horizontal sync signal (APC) and C. SYNC (sync separator). The output polarity can be selected. (Metal option) Alternatively, general-purpose port output (switched by command).
30	VDD1	–	Power supply (+5 V of digital circuits)

IC, CXP88748

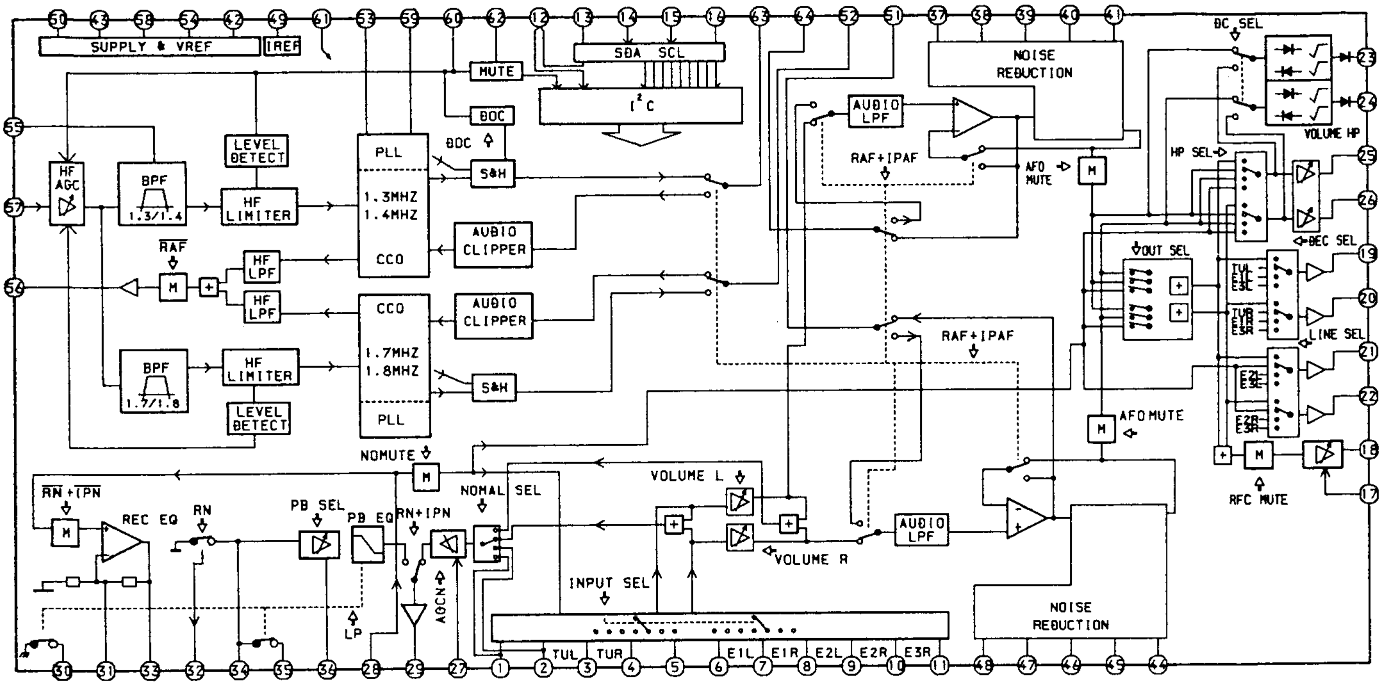
<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>$\overline{\text{SP}}$/LP</td><td>O</td><td>Video/audio switching signal. “L” in the SP mode</td></tr>
<tr><td>2</td><td>LED LCK</td><td>O</td><td>Latch signal to transfer data to the LED driver.</td></tr>
<tr><td>3</td><td>REC MUTE</td><td>O</td><td>Hi-Fi audio record muting signal. Outputs “H” pulses when recording is started or finished.</td></tr>
<tr><td>4</td><td>SSB SCK</td><td>O</td><td>Clock signal for transfer to the video IC</td></tr>
<tr><td>5</td><td>SSB DATA</td><td>O</td><td>Data signal for transfer to the video IC</td></tr>
<tr><td>6</td><td>SENS LED</td><td>O</td><td>Top/end sensor LED drive signal</td></tr>
<tr><td>7</td><td>DECORD</td><td>I</td><td>Canal decoder detection signal. “H” is input when it is detected.</td></tr>
<tr><td>8</td><td>VPB</td><td>O</td><td>Video HA playback system ON signal. Outputs “H” during playback.</td></tr>
<tr><td>9</td><td>IIC SDA</td><td>I/O</td><td>Data signal for communications with the IIC bus (Hi-Fi/NICAM/PDC/EEPROM).</td></tr>
<tr><td>10</td><td>$\overline{\text{CAP ON}}$</td><td>O</td><td>Capstan ON signal. “L” to drive, “H” to stop</td></tr>
<tr><td>11</td><td>CAP $\overline{\text{F}}$/R</td><td>O</td><td>Capstan reverse signal. “L” for forward drive, “H” for reverse drive.</td></tr>
<tr><td>12</td><td>CAP FULL</td><td>O</td><td>Capstan acceleration signal. “H” during acceleration</td></tr>
<tr><td>13</td><td>LOAD</td><td>O</td><td rowspan="2">Loading motor drive control outputs
<table>
<tr><td>LOAD</td><td>L</td><td>H</td><td>L</td><td>H</td></tr>
<tr><td>UNLOAD</td><td>L</td><td>L</td><td>H</td><td>H</td></tr>
<tr><td></td><td>Stop</td><td>Forward</td><td>Reverse</td><td>Brake</td></tr>
</table></td></tr>
<tr><td>14</td><td>UNLOAD</td><td>O</td></tr>
<tr><td>15</td><td>TOP – SENS</td><td>I</td><td>Tape start detection signal</td></tr>
<tr><td>16</td><td>END – SENS</td><td>I</td><td>Tape end detection signal</td></tr>
<tr><td>17</td><td>MODE SW1</td><td>I</td><td>Mechanism mode switch 1</td></tr>
<tr><td>18</td><td>MODE SW2</td><td>I</td><td>Mechanism mode switch 2</td></tr>
<tr><td>19</td><td>MODE SW3</td><td>I</td><td>Mechanism mode switch 3</td></tr>
<tr><td>20</td><td>MODE SW4</td><td>I</td><td>Mechanism mode switch 4</td></tr>
<tr><td>21</td><td>CST SW</td><td>I</td><td>Cassette-down signal</td></tr>
<tr><td>22</td><td>DENV</td><td>I</td><td>Video head playback output comparison signal. “H” when the LP head output is higher than the SP head output.</td></tr>
<tr><td>23</td><td>PRT</td><td>I</td><td>Power monitoring input. “H” is input when the regulator power supply is started.</td></tr>
<tr><td>24</td><td>CG DATA</td><td>O</td><td>Outputs serial data for transfer to the OSD IC</td></tr>
<tr><td>25</td><td>CG SCK</td><td>O</td><td>Outputs serial clock for transfer to the OSD IC</td></tr>
<tr><td>26</td><td>$\overline{\text{CG CS}}$</td><td>O</td><td>Chip select signal for transfer to the OSD IC</td></tr>
<tr><td>27</td><td>CHECK</td><td>O</td><td>Analog amp check</td></tr>
<tr><td>28</td><td>TU PWM</td><td>O</td><td>Tuner PWM output</td></tr>
<tr><td>29</td><td>$\overline{\text{RMC}}$</td><td>I</td><td>Remote signal input</td></tr>
<tr><td>30</td><td>IIC SCK</td><td>O</td><td>Clock signal for communications with the IIC bus (Hi-Fi/NICAM/PDC/EEPROM)</td></tr>
<tr><td>31</td><td>$\overline{\text{U BAND}}$</td><td>O</td><td>Tuner band switching signal. “L” for U band</td></tr>
<tr><td>32</td><td>$\overline{\text{H BAND}}$</td><td>O</td><td>Tuner band switching signal. “L” for VH band</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
33	L BAND	O	Tuner band switching signal. "L" for VL band
34	AFT DEF	O	AFT ON/OFF signal. "L" for OFF
35	T MUTE	O	Tuner audio muting signal. "L" for muting
36	JOG	O	Special effects playback ON signal. "L" for ON
37	CAP UP	O	Capstan drive power voltage switching
38	I – LIMIT	O	I-LIMIT switching signal. "L" for limiting
39	N. C	–	Connected to ground.
40	RESET	I	CPU reset input
41	GND	–	Ground
42	XTAL	–	For the connection of a 16 MHz crystal oscillator which generates the main clock signals
43	EXTAL	–	
44	REC SAFTY	I	Erase prevention switch detection input. "L" input enables recording.
45	TEST	I	Test mode start input. "L" to start.
46	(MESECAM)	O	(Video system control signal. "H" for MESECAM)
47	POWER	O	Regulator power ON signal. "H" for ON
48	T – POWER	O	PDC operation power ON signal. "H" for ON
49	AGC LEVEL	I	A/D input for the tuner reception detection state
50	WAKE – UP	I	Power failure detection signal. "H" is input when a power failure has occurred.
51	TRRST	I	Tracking adjustment terminal. "L" input sets the tracking to the center.
52	A VSS	–	A/D ground
53	A VREF	–	A/D reference voltage
54	A VDD	–	A/D power supply
55	SYNC DET	I	Video signal detection input. "L" when there is a video signal, "L" when thereis no video signal.
56	DAV	I	PDC transmission enable/disable signal. "L" : Transmission is possible.
57	POS	I	A/D input for HSW control
58	A LEVEL	I	Hi-Fi audio envelope detection input for autotracking (analog input)
59	V LEVEL	I	Video envelope detection input for autotracking (analog input)
60	AFT CURVE	I	Tuner AFT status detection A/D input
61	VDD	–	+5V power supply
62	RECCAP	I	Sets the ramp of the written trapezoidal wave
63	AMP VDD	–	Power supply of amp
64	HEAD (–)	I	Connected to the negative (–) terminal of the CTL head.
65	HEAD (+)	I	Connected to the positive (+) terminal of the CTL head.
66	PBCTL(+)	I	The CTL head (+) pulses are input during playback.

Pin No.	Pin Name	I/O	Description
67	PBCTL(−)	I	The CTL head (−) pulses are input during playback.
68	AMP(−)	I	CTL first amp negative (−) terminal
69	AMP(+)	I	CTL first amp positive (+) terminal
70	AG	I	For the connection of a smoothing capacitor
71	CTL OUT	O	CTL first amp input
72	CTL IN	I	CTL second amp input
73	Amp VSS	–	Amp ground
74	VREF	O	Outputs a reference voltage for the internal amps.
75	DPG	I	Drum PG input
76	DFG	I	Drum FG input
77	CFG	I	Capstan FG input
78	CAP PWM	O	Capstan control PWM output
79	DRUM D/A	O	Drum control D/A output
80	T REEL	I	Take-up reel rotation detection
81	S REEL	I	Supply reel rotation detection
82	C SYNC	I	Composite sync input
83	FL SI	I	Serial data input to communicate with the FL driver
84	FL DATA	O	Data output to communicate with the FL driver/LED driver IC
85	FL SCK	O	Clock output to communicate with the FL driver/LED driver IC
86	TEXTAL	–	For the connection of a 32.768 kHz crystal which generates a sub-clock signal.
87	TXTAL	–	
88	GND	–	Ground
89	VDD	–	+5V power supply
90	N. C	–	Connected to a power supply
91	$\overline{\mathrm{REC-V}}$	O	Video recording ON signal. Outputs “L” when recording.
92	H SEL	O	Video head amp switching signal. Outputs “H” when the LP head is selected.
93	C ROT	O	Chroma rotation signal. “H” when the Rch head is selected.
94	HSW − V	O	Video head amp switching signal. “H” when the 1ch head is selected.
95	HSW − A	O	Hi-Fi head switching signal
96	REC − A	O	“H” when the Hi-Fi-HA recording ON signal is recorded.
97	$\overline{\mathrm{FL\ CS}}$	O	Chip select output for communications with the FL driver.
98	JOG VD	O	Artificial V sync signal
99	CA SCK	O	Outputs a clock signal for transfer to the Canal IC.
100	CA DATA	O	Outputs the data for transfer to the Canal IC.

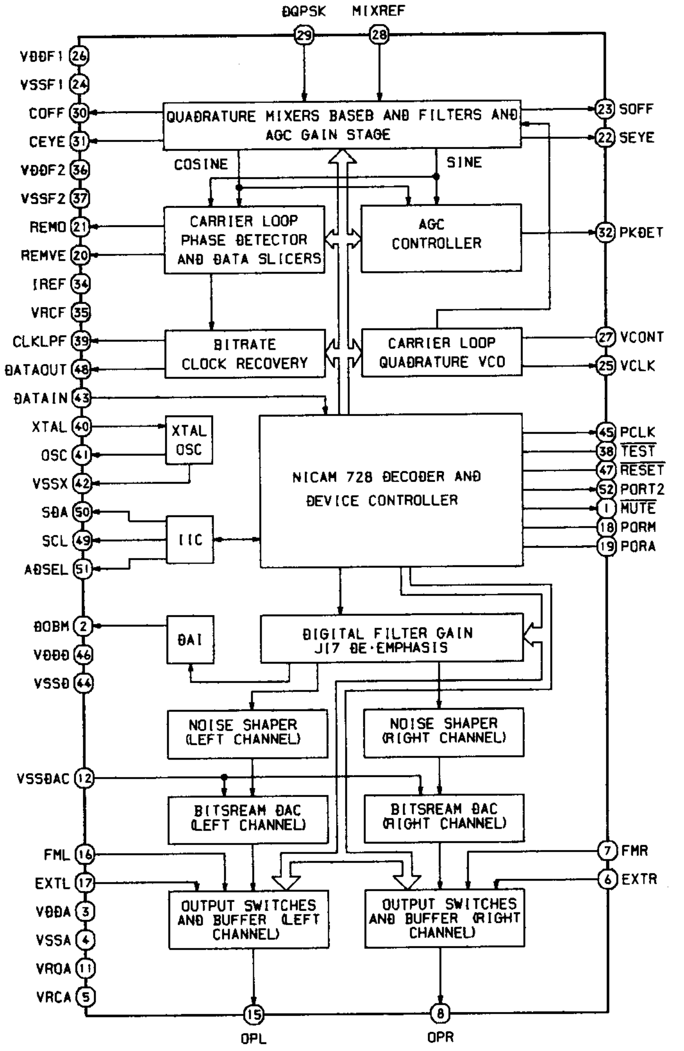
IC BLOCK DIAGRAM

IC, TDA9614H



SUPPLY & VREF
IREF
MUTE
SDA SCL
I²C
DOC
NOISE REDUCTION
BC SEL
VOLUME HP
HP SEL
AUDIO LPF
RAF+IPAF
AFO MUTE
HF AGC
BPF
1.3/1.4
LEVEL DETECT
HF LIMITER
PLL
1.3MHZ
1.4MHZ
CCO
S&H
AUDIO CLIPPER
RAF
HF LPF
M
1.7MHZ
1.8MHZ
1.7/1.8
OUT SEL
DEC SEL
LINE SEL
TUL
E1L
E3L
TUR
E1R
E3R
E2L
E2R
AFO MUTE
RFC MUTE
NOMUTE
RN+IPN
REC EQ
RN
PB SEL
PB EQ
RN+IPN
NOMAL SEL
AOCN
LP
VOLUME L
VOLUME R
INPUT SEL
TUL
TUR
E1L
E1R
E2L
E2R
E3R
NOISE REDUCTION

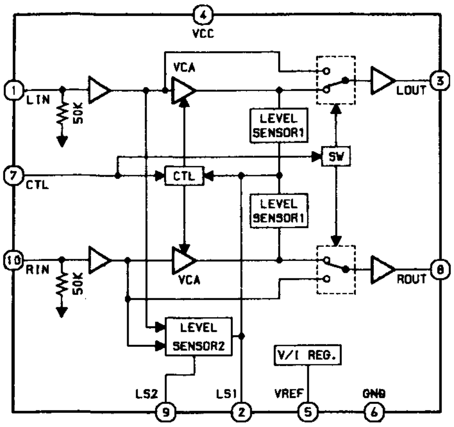
IC, SAA7283ZP



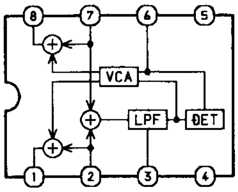
DQPSK
MIXREF
VDDF1 26
VSSF1 24
COFF 30
CEYE 31
VDDF2 36
VSSF2 37
REMD 21
REMVE 20
IREF 34
VRCF 35
CLKLPF 39
DATAOUT 48
DATAIN 43
XTAL 40
OSC 41
VSSX 42
SDA 50
SCL 49
ADSEL 51
DDBM 2
VDDD 46
VSSD 44
VSSDAC 12
FML 16
EXTL 17
VDDA 3
VSSA 4
VRDA 11
VRCA 5
29
28
QUADRATURE MIXERS BASEB AND FILTERS AND AGC GAIN STAGE
COSINE
SINE
CARRIER LOOP PHASE DETECTOR AND DATA SLICERS
AGC CONTROLLER
BITRATE CLOCK RECOVERY
CARRIER LOOP QUADRATURE VCO
XTAL OSC
IIC
NICAM 728 DECODER AND DEVICE CONTROLLER
DAI
DIGITAL FILTER GAIN J17 DE-EMPHASIS
NOISE SHAPER (LEFT CHANNEL)
NOISE SHAPER (RIGHT CHANNEL)
BITSREAM DAC (LEFT CHANNEL)
BITSREAM DAC (RIGHT CHANNEL)
OUTPUT SWITCHES AND BUFFER (LEFT CHANNEL)
OUTPUT SWITCHES AND BUFFER (RIGHT CHANNEL)
23 SOFF
22 SEYE
32 PKDET
27 VCONT
25 VCLK
45 PCLK
38 TEST
47 RESET
52 PORT2
1 MUTE
18 PORM
19 PORA
7 FMR
6 EXTR
15
OPL
8
OPR

⟺ REPRESENTS CONTROLLER BUS

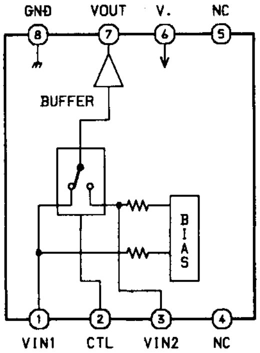
IC, AN5285K


4
VCC
VCA
1
LIN
50K
LOUT
3
LEVEL SENSOR1
SW
7
CTL
CTL
LEVEL SENSOR1
10
RIN
50K
VCA
ROUT
8
LEVEL SENSOR2
V/I REG.
LS2
LS1
VREF
GND
9
2
5
6

IC, CXA1649M

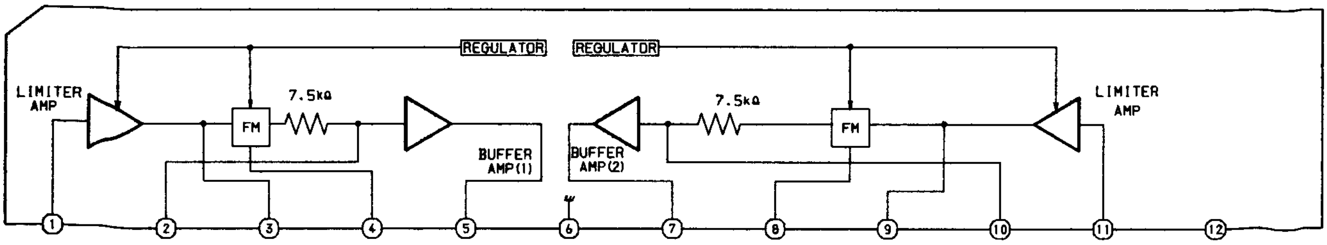

8
7
6
5
VCA
LPF
DET
1
2
3
4

IC, NJM2233BM

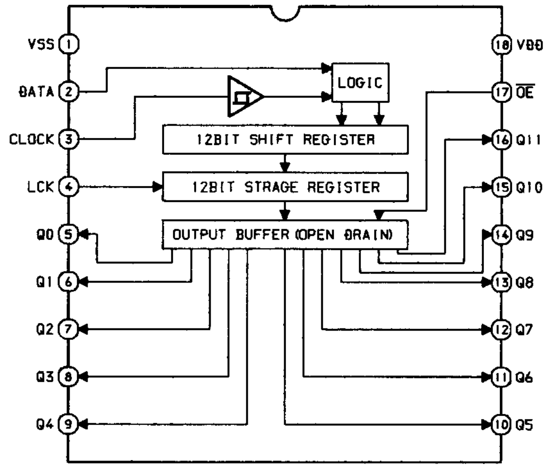

GND
VOUT
V.
NC
8
7
6
5
BUFFER
BIAS
1
2
3
4
VIN1
CTL
VIN2
NC

CTL	OUTPUT
L	VIN1
H	VIN2

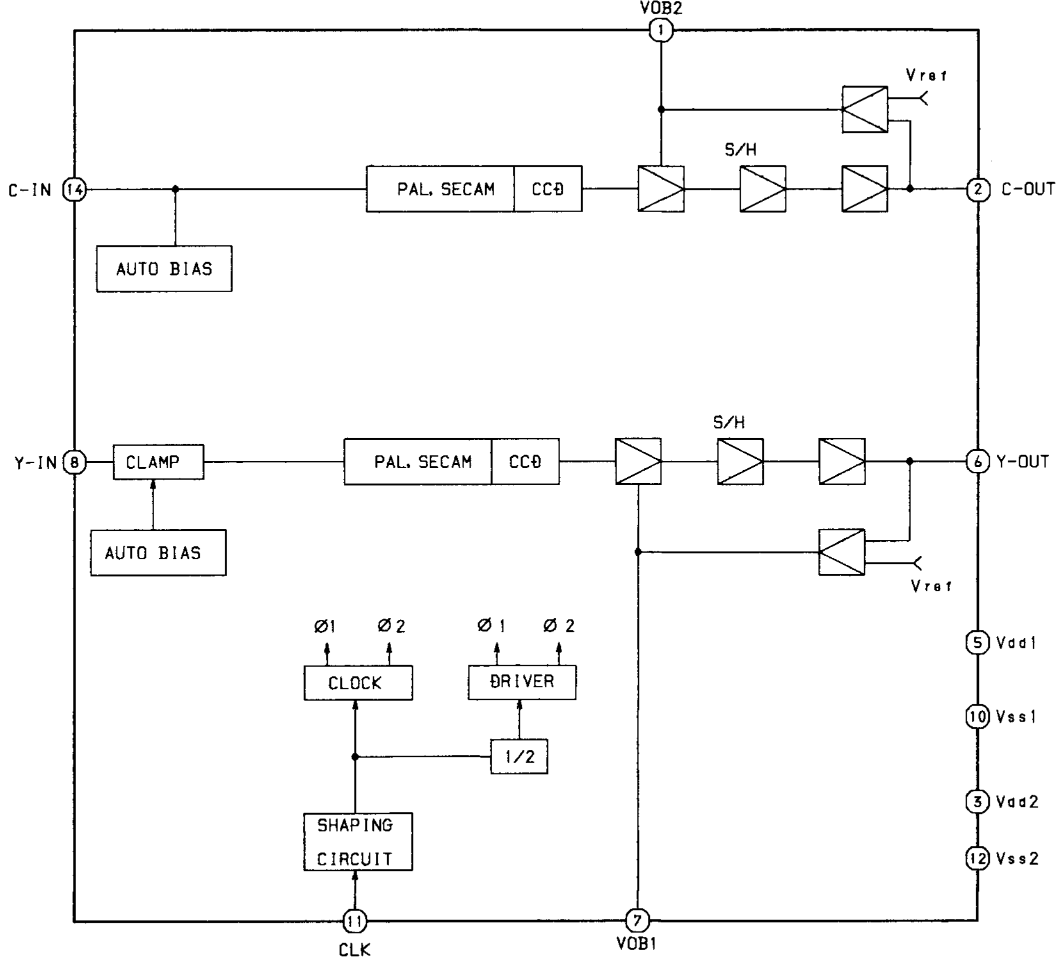
IC, TA8721ASN


REGULATOR
REGULATOR
LIMITER AMP
7.5kΩ
FM
BUFFER AMP(1)
BUFFER AMP(2)
7.5kΩ
FM
LIMITER AMP
1
2
3
4
5
6
7
8
9
10
11
12

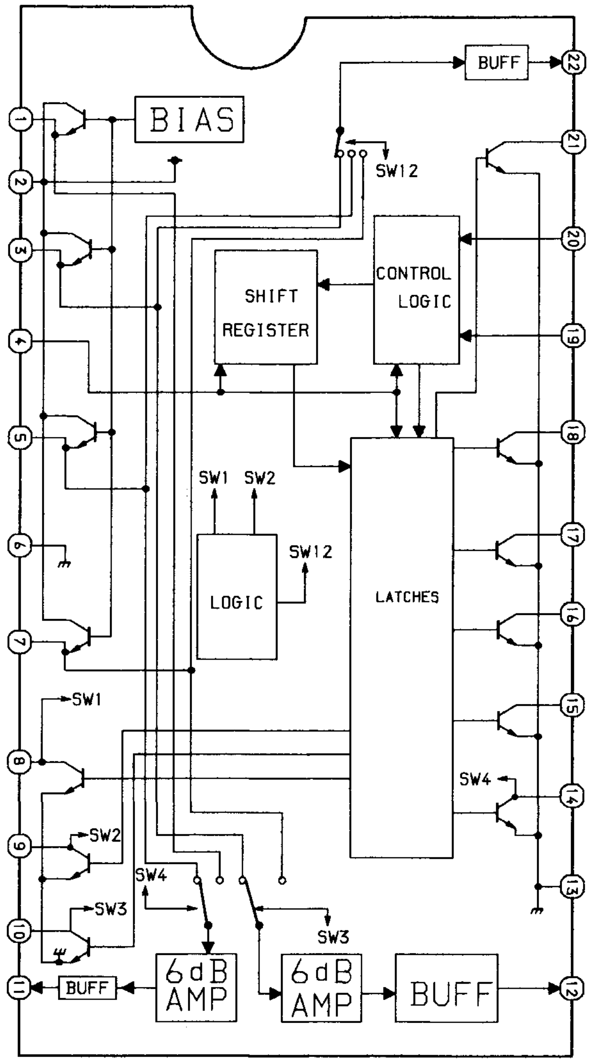
IC, BU2092F


VSS 1
ĐATA 2
CLOCK 3
LCK 4
Q0 5
Q1 6
Q2 7
Q3 8
Q4 9
18 VĐĐ
17 $\overline{OE}$
16 Q11
15 Q10
14 Q9
13 Q8
12 Q7
11 Q6
10 Q5
LOGIC
12BIT SHIFT REGISTER
12BIT STRAGE REGISTER
OUTPUT BUFFER (OPEN ĐRAIN)

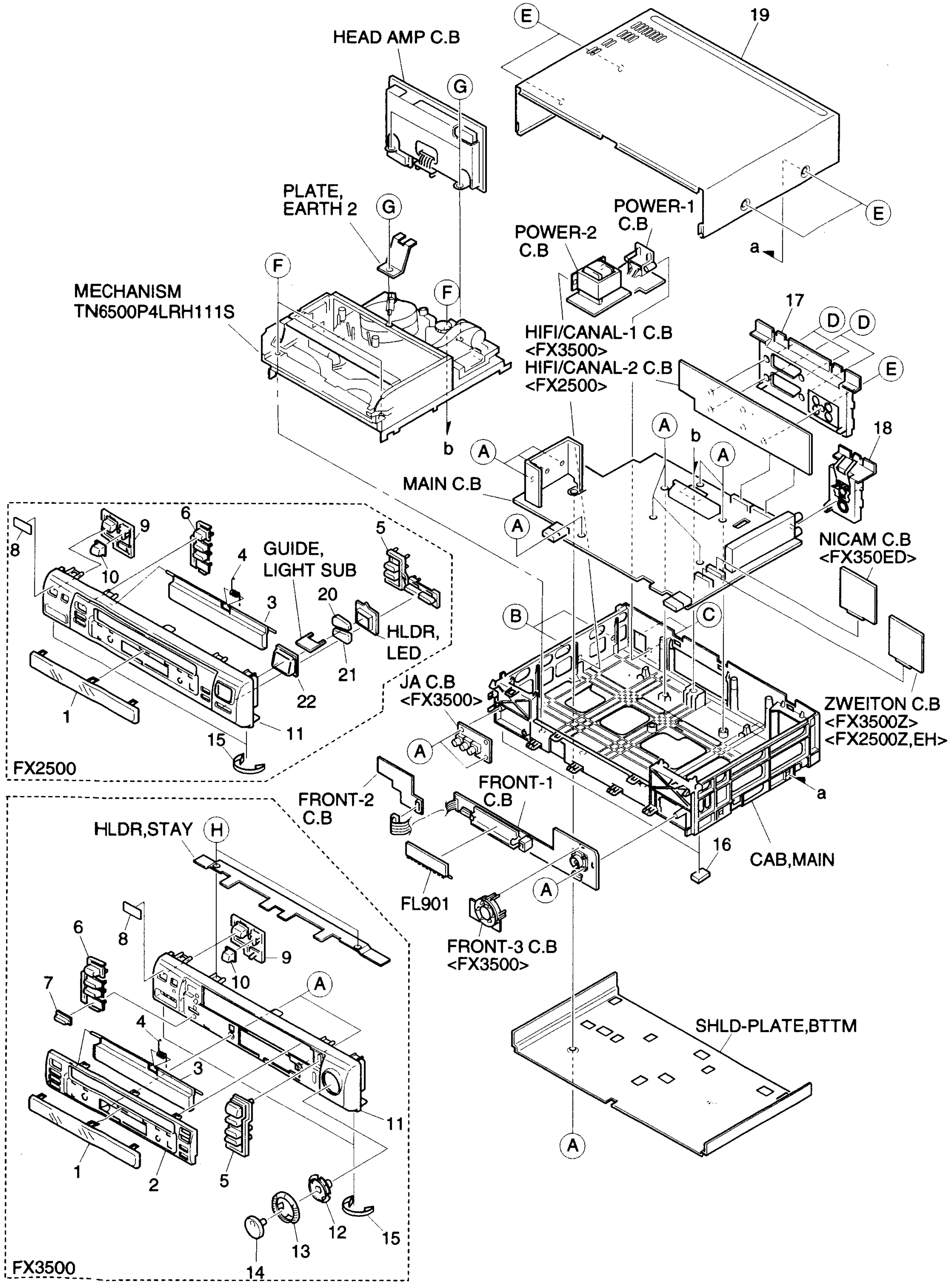
IC, MSM7460 – 63RS


VOB2
1
Vref
S/H
C-IN 14
PAL, SECAM
CCĐ
2 C-OUT
AUTO BIAS
S/H
Y-IN 8
CLAMP
PAL, SECAM
CCĐ
6 Y-OUT
AUTO BIAS
Vref
Ø1
Ø2
CLOCK
Ø1
Ø2
ĐRIVER
1/2
SHAPING CIRCUIT
5 Vdd1
10 Vss1
3 Vdd2
12 Vss2
11
CLK
7
VOB1

IC, BA7630S


1
2
3
4
5
6
7
8
9
10
11
22
21
20
19
18
17
16
15
14
13
12
BIAS
BUFF
SW12
CONTROL LOGIC
SHIFT REGISTER
SW1
SW2
LOGIC
SW12
LATCHES
SW1
SW2
SW3
SW4
SW4
SW3
BUFF
6dB AMP
6dB AMP
BUFF

MECHANICAL EXPLODED VIEW 1/1



HEAD AMP C.B
E
G
19
PLATE, EARTH 2
G
POWER-2 C.B
POWER-1 C.B
E
a
F
F
MECHANISM TN6500P4LRH111S
HIFI/CANAL-1 C.B <FX3500>
HIFI/CANAL-2 C.B <FX2500>
17
D
D
E
b
A
A
b
A
18
MAIN C.B
A
NICAM C.B <FX350ED>
B
C
8
9
10
6
4
GUIDE, LIGHT SUB
5
3
20
HLDR, LED
21
22
1
11
15
FX2500
JA C.B <FX3500>
ZWEITON C.B <FX3500Z> <FX2500Z,EH>
A
FRONT-2 C.B
FRONT-1 C.B
a
16
CAB,MAIN
HLDR,STAY
H
FL901
A
FRONT-3 C.B <FX3500>
6
8
9
10
7
A
4
3
SHLD-PLATE,BTTM
11
1
2
5
12
13
15
14
A
FX3500

MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	86-JU1-025-01S		WINDOW,DSPLY AE<3500ED>
1	86-JU1-023-010		WINDOW,DISPLAY Z<3500Z>
1	86-JU2-010-010		WINDOW,DISPLAY Z<2500Z>
1	86-JU2-016-010		WINDOW,DISPLAY<2500EH>
2	86-JU1-004-019		PANEL,FR<3500Z,3500ED>
3	86-JU1-022-01S		DOOR,CASS Z<3500Z>
3	86-JU1-026-010		DOOR,CASS ED<3500ED>
3	86-JU2-009-010		DOOR,CASS Z<2500Z,2500EH>
4	84-JP9-202-019		SPR-T,DOOR
5	86-JU1-012-019		KEY,CONT<3500Z,3500ED>
5	86-JU2-004-019		KEY,CONT<2500Z,2500EH>
6	86-JU1-010-019		KEY,CH<3500Z,3500ED>
6	86-JU2-003-019		KEY,CH<2500Z,2500EH>
7	86-JU1-011-019		BTN,MNT<3500Z,3500ED>
8	82-NE6-067-019		BADGE AIWA 30N
9	86-JU1-008-019		KEY,POWER
10	86-JU1-009-019		BTN,PB
11	86-JU1-001-019		CABI,FR<3500Z,3500ED>
11	86-JU2-014-010		CABI,FR EH<2500Z,2500EH>
12	86-JU1-017-019		LENS,SHUTTLE<3500Z,3500ED>
13	86-JU1-014-019		KNOB,SHUTTLE<3500Z,3500ED>
14	86-JU1-013-019		KNOB,RTRY JOG<3500Z,3500ED>
15	84-JP9-021-119		PLATE,FOOT HAIR
16	81-JUK-045-019		FELT,FOOT 8-8
17	86-JU1-005-019		PANEL,JACK
18	86-JU1-006-019		PANEL,RF
19	86-JU1-030-018		CABI,STEEL UK
20	85-JU7-006-010		KEY,PLAY<2500Z,2500EH>
21	85-JU7-007-010		KEY,STOP<2500Z,2500EH>
22	86-JU2-012-010		LENS,LED<2500Z,2500EH>
A	87-067-579-019		BVT 2+3-8 W/O SLOT
B	87-078-070-019		BVIT3B+4-12
C	87-067-761-019		BVT2+3-10 BLK
D	87-078-180-019		BVT2+3.5-12(BLK)
E	87-067-660-019		BVT2+3-8W/O SLOT BLK
F	87-067-703-019		BVT2+3-10 (W/O SLOT)
G	87-067-688-019		BVTT +3-6
H	87-751-096-410		VT2+3-10 W/O SLOT<3500Z,3500ED>

■ ACCESSORIES／PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	86-JU2-905-010		IB,Z(E-G-DU)-W<2500Z>
1	86-JU2-906-010		IB,EH(E-G-DU)-W<2500EH>
1	86-JU1-907-010		IB,Z(E-G-DE)-W<3500Z>
1	86-JU1-908-010		IB,ED(E-G-DE)-W<3500ED>
⚠2	87-050-076-010		AC CORD SET ASSY,E
3	86-JU2-680-010		RC UNIT,RC-6VR05<2500Z,EH>
3	86-JU1-675-010		RC UNIT,RC-6VR06<3500Z,ED>
4	87-A80-032-010		CORD,PIN 2P RED-WHT
5	87-034-796-010		CORD,RF PAL S
6	86-JU1-007-010		COVER,JACK<3500Z,ED>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART

サービス技術ニュース	
番　号	連絡内容
G－　－	
G－　－	
G－　－	

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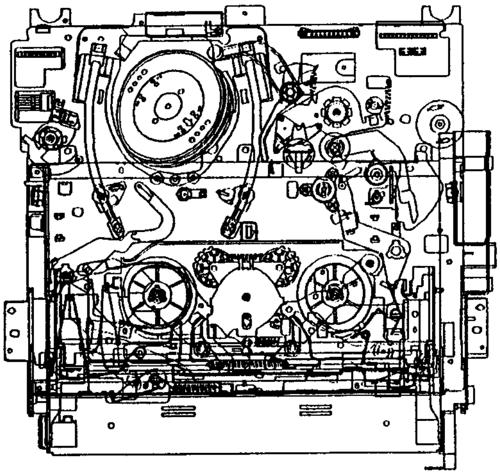
SERVICE

V15136

TN-6500



VIDEO MECHANISM

SERVICE MANUAL

• TYPE: English,Japanese

BASIC NAME	DERIVATION				
	No.	NAME			
TN-6500	A	109	110		
	B	107	108		
	C	206			
	D	208			

For diffrent version of mechanism that may be introduced since the issue of this manual, only the new or modified points be discussed.

S/M Code No. 09-95B-115-90T

VCR TEST TAPE INTERCHANGEABILITY TABLE

新しいタイプのテストテープは、CH-1 (NTSC用) とCH-2 (PAL用) の2種類があります。それぞれのテープには、(1) ～ (4) で区別する4種類の信号が、次の順番と時間で記録されています。
There are two types of the new allgnment tape CH-1B (for NTSC) and CH-2 (for PAL) . On each tape four signals (1) - (4) are recorded for the times and in the order shown below.

(1) : 8min. → (2) : 2min. → (3) : 5min. → (4) : 5min.

TTV-MP1 (M-PAL用) ,TTV-MS1 (MESECAM用) ,TTV-S1 (SECAM用) については現行通りです。
The TTV-MP1 (for M-PAL) ,TTV-MS1 (for MESECAM) and TTV-S1 (for SECAM) allgnment tapes have the same contents as the previous tapes.

方式 Method	現行タイプ Now in use TYPE		新タイプ New Type		主な用途 Application
	テープ名 Model	記録内容 ※1 Contents ※1	テープ名 Model	記録内容 ※1 Contents ※1	
NTSC	TTV-N1	NTSC,Color, 1kHz,SP	CH-1B(2)	NTSC,Stairsteps, 1kHz,SP	PB-Yﾚﾍﾞﾙ調整等の一般電気調整。ACEﾍｯﾄﾞの高さ/傾き調整。 PB-Y Level/General electrical ADJ.Head ACE Height/Tilt ADJ.
	TTV-N1E	NTSC,Color, 1kHz,EP	CH-1B(4) ※2	NTSC,Color,1kHz, EP	ｽｲｯﾁﾝｸﾞ位置調整。 Switching position ADJ.
	TTV-N2	NTSC,Stairsteps, 7kHz,SP	CH-1B(1)	NTSC,Stairsteps, 7kHz,SP	ACEﾍｯﾄﾞのｱｼﾞﾏｽ調整。ｽｰﾊﾟｰｸﾘｱｰﾋﾟｸﾁｬｰのﾚﾍﾞﾙ調整。 Head ACE Azimuth ADJ.
	TTV-N12 (SCV-1998)	NTSC,Color, 1kHz,SP	CH-1B(4)	NTSC,Color,1kHz, EP	FMｴﾝﾍﾞﾛｰﾌﾟ調整。Xﾊﾞﾘｭｰ(位相)調整。 FM Envelope ADJ. X-Value ADJ.
	TTV-N7A	NTSC,Stairsteps, 1kHz,SP,HiFi400Hz	CH-1B(3)	NTSC,Color,No sound SP,HiFi400Hz	HiFiｵｰﾃﾞｨｵ再生ﾚﾍﾞﾙ調整。 HiFi Audio PB Level ADJ.
PAL	TTV-P1	PAL,Color, 1kHz,SP	CH-2(2) ※3	PAL,Stairsteps, 1kHz,SP	ｽｲｯﾁﾝｸﾞ位置調整。(SP専用ﾓﾃﾞﾙ)PB-Yﾚﾍﾞﾙ調整等の一般電気調整。ACEﾍｯﾄﾞの高さ/傾き調整。 Switching position ADJ. PB-Y Level/General electrical ADJ. Head ACE Height/Tilt ADJ.
	TTV-P1L	PAL,Color, 1kHz,LP	CH-2(4)	PAL,Color,1kHz, LP	ｽｲｯﾁﾝｸﾞ位置調整。(LP対応ﾓﾃﾞﾙ)FMｴﾝﾍﾞﾛｰﾌﾟ調整。(LP対応ﾓﾃﾞﾙ) Xﾊﾞﾘｭｰ(位相)調整。(LP対応ﾓﾃﾞﾙ) Switching position.(LP Model)FM Envelope ADJ. (LP Model)X-Value ADJ.(LP Model)
	TTV-P2	PAL,Stairsteps, 6kHz,SP	CH-2(1)	PAL,Stairsteps, 6kHz,SP	ACEﾍｯﾄﾞのｱｼﾞﾏｽ調整。FMｴﾝﾍﾞﾛｰﾌﾟ調整。(SP専用ﾓﾃﾞﾙ) Xﾊﾞﾘｭｰ(位相)調整。(SP専用ﾓﾃﾞﾙ) Head ACE Azimuth ADJ. FM Envelope ADJ.(SP Model) X-Value ADJ.(SP Model)
	TTV-P7	PAL,Stairsteps, 1kHz,SP,HiFi 1kHz	CH-2(3)	PAL,Color,No sound SP,HiFi400Hz	HiFiｵｰﾃﾞｨｵ再生ﾚﾍﾞﾙ調整。 HiFi Audio PB Level ADJ.
	TTV-P16	PAL,Color, 400Hz,SP,HiFi 1kHz	変更なし No Changed.		FMﾌｨﾙﾀｰ調整 FM Filter ADJ.

※ 1. ｶﾗｰ方式→映像信号→ﾉｰﾏﾙ音声→ﾃｰﾌﾟｽﾋﾟｰﾄﾞ→HiFi音声 の順で記載されています。
※ 1. Described in the order of color format. video signal. linear audio. tape speed and Hi-Fi audio.
※ 2. SP専用ﾓﾃﾞﾙの場合は、CH-1B の (1) ～ (3) を使用して下さい。
※ 2.Use CH-1B (1) - (3) with models used exclusively in the SP mode.
※ 3. 色信号の観測が必要な場合はCH-2の (3) または (4) を使用して下さい。
※ 3.Use CH-2 (3) and (4) when it is necessary to observe the chroma signal.

STANDARD MAINTENANCE

1. SERVICE SCHEDULE

○：チェック　●：交換

デッキ			定期サービス表			
BLOCK NAME	Ref. No.	部品名	1000h	2000h	3000h	4000h
	110	TENSION ARM ASS' Y		●		●
	80, 81	T.S REEL ASS' Y			●	
	120	SUB PLATE ASS' Y		●		●
	142	LOADING MOTOR ASS' Y			●	
	100	CAPSTAN MOTOR		●		●
	90	PINCH ROLLER ARM ASS' Y		●		●
	123	RF CLUTCH ASS' Y		●		●
	61	ACE HEAD HVMZA1220			●	
	66	FE HEAD BASE ASS' Y			●	
	5	DRUM EARTH ASS' Y			●	
	1	CYLINDAR ASS' Y	○	●	○	●

注意：
- テープ走行系のすべての部品を清掃し、清掃後はデッキ調整すべてを行なうこと。
  ビデオヘッド/ピンチローラ/ACEヘッド/フルイレーズヘッド

2. CLEANING

1.　ビデオヘッドの清掃（Fig-1 参照）

1) スチールキャビネットをはずす。
2) 素手でアッパードラムやロワードラムに触れぬ様手袋（薄いもの）をする。
3) ヘッドクリーニング用クロス又はセーム（鹿）皮にアルコールを2、3滴つけ、ヘッドチップに軽くあててアッパードラムを反時計方向に回す。

注意
- ビデオヘッドは非常に硬い物質でできていますが、非常に薄いため、縦方向に清掃するのは避けて下さい。
- 清掃した箇所が乾くまでセットを作動しないで下さい。
- 汚れたヘッドクリーニング用クロス又はセーム（鹿）皮は再使用しないで下さい。

2.　ACヘッドのクリーニング（Fig-2 参照）

1) スチールキャビネットを外す。
2) ヘッドクリーニング用クロス又はセーム（鹿）皮にアルコールを2、3滴つけて、アッパードラムや他の走行系部品を痛めない様注意しながら、クリーニングする。

注意
- ACヘッドを縦方向にクリーニングしないで下さい。
- クリーニングした箇所が乾くまでセットを作動しないで下さい。

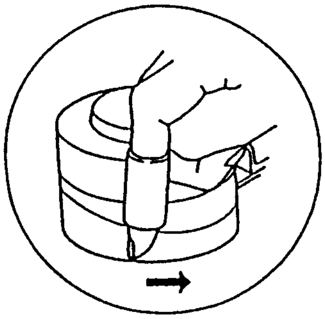


Fig-1

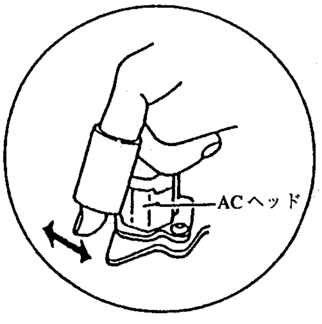


Fig-2

STANDARD MAINTENANCE

1. SERVICE SCHEDULE

○ : Check ● : Replacement

Deck			Periodic Maintenance Table			
BLOCK NAME	Ref. No.	PARTS NAME	1000h	2000h	3000h	4000h
	110	TENSION ARM ASS' Y		●		●
	80, 81	T.S REEL ASS' Y			●	
	120	SUB PLATE ASS' Y		●		●
	142	LOADING MOTOR ASS' Y			●	
	100	CAPSTAN MOTOR		●		●
	90	PINCH ROLLER ARM ASS' Y		●		●
	123	RF CLUTCH ASS' Y		●		●
	61	ACE HEAD HVMZA1220			●	
	66	FE HEAD BASE ASS' Y			●	
	5	DRUM EARTH ASS' Y			●	
	1	CYLINDAR ASS' Y	○	●	○	●

Note:

- Clean all the parts of the tape running mechanism. After cleaning the parts, perform all items of the deck adjustment.
  Video Head, Pinch Roller, ACE Head and Full Erase Head

2. CLEANING

1. Video Head Cleaning (Refer to Fig-1.)

1) Remove the steel cabinet.
2) Do not touch the upper drum and lower drum with bare hand. Put on gloves (thin).
3) Apply two or three drops of alcohol to the head cleaning cloth or chamois. Touch the head cleaning cloth gently on the head tip and turn the upper drum counter-clockwise for cleaning.

Caution

- Even though the video head is made of very hard material, it is very thin. Never move the cleaning cloth vertically.
- Do not operate the machine before the cleaned areas are dried up.
- Do not re-use the stained head cleaning cloth or chamois.

2. ACE Head Cleaning (Refer to Fig-2.)

1) Remove the steel cabinet.
2) Apply two or three drops of alcohol to the head cleaning cloth or chamois. Clean the ACE head while taking care not to give damage to the upper drum and other tape path mechanical parts.

Caution

- Do not move the cleaning cloth vertically on the ACE head.
- Do not operate the machine before the cleaned areas are dried up.

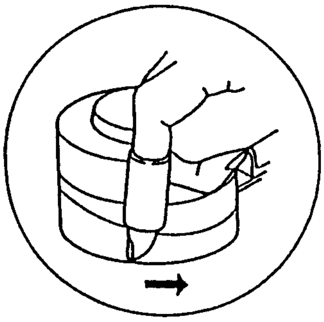


Fig-1

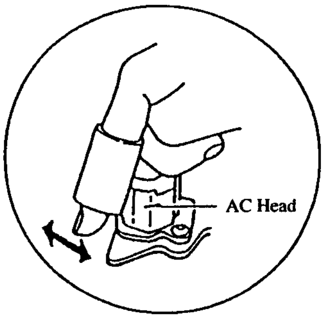


Fig-2

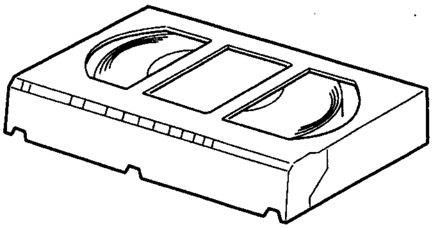
SERVICE JIG AND TOOLS

1. ALIGNMENT TAPES FOR ADJUSTMENT

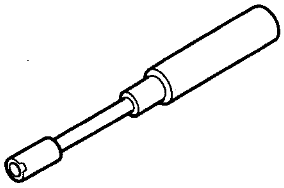
DERIVATION No.		A	B	C	D
Mechanism Adjustment		PAL SP/LP 2/4 Head	PAL SP 2Head	NTSC SP/EP 2/4 Head	NTSC SP/EP 2 Head (HIFI)
FM Envelope		CH-2(4) (TTV-P1L)	CH-2(1) (TTV-P2)	CH-1B(4) (TTV-N12)	CH-B(1) (TTV-N2)
AC Head	Tilt	Blank Tape			
	Height	CH-2(2) (TTV-P1)	CH-2(2) (TTV-P1)	CH-1B(2) (TTV-N1)	CH-1B(2) (TTV-N1)
	Azimuth	CH-2(1) (TTV-P2)	CH-2(1) (TTV-P2)	CH-1B(1) (TTV-N2)	CH-1B(1) (TTV-N2)
X Value		CH-2(4) (TTV-P1L)	CH-2(1) (TTV-P2)	CH-1B(4) (TTV-N12)	CH-1B(2) (TTV-N1)
Back Tension		SRK-VHT-103			

Ref No.	Name	Use
J-1	Torque meter (SRK-VHT-063)	Back tension measurement
J-2	Adjustment Screwdriver (Small) SV-TG0-030-000	Tape path
J-3	Adjustment Screwdriver (Large) SV-TG0-020-000	Tape path
J-4	Box Type Screwdriver M3	Tape path
J-5	Mirror	Tape path

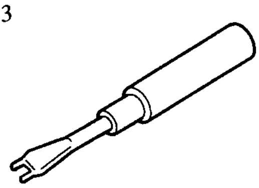
J-1



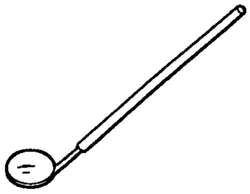
J-4



J-2, J-3



J-5

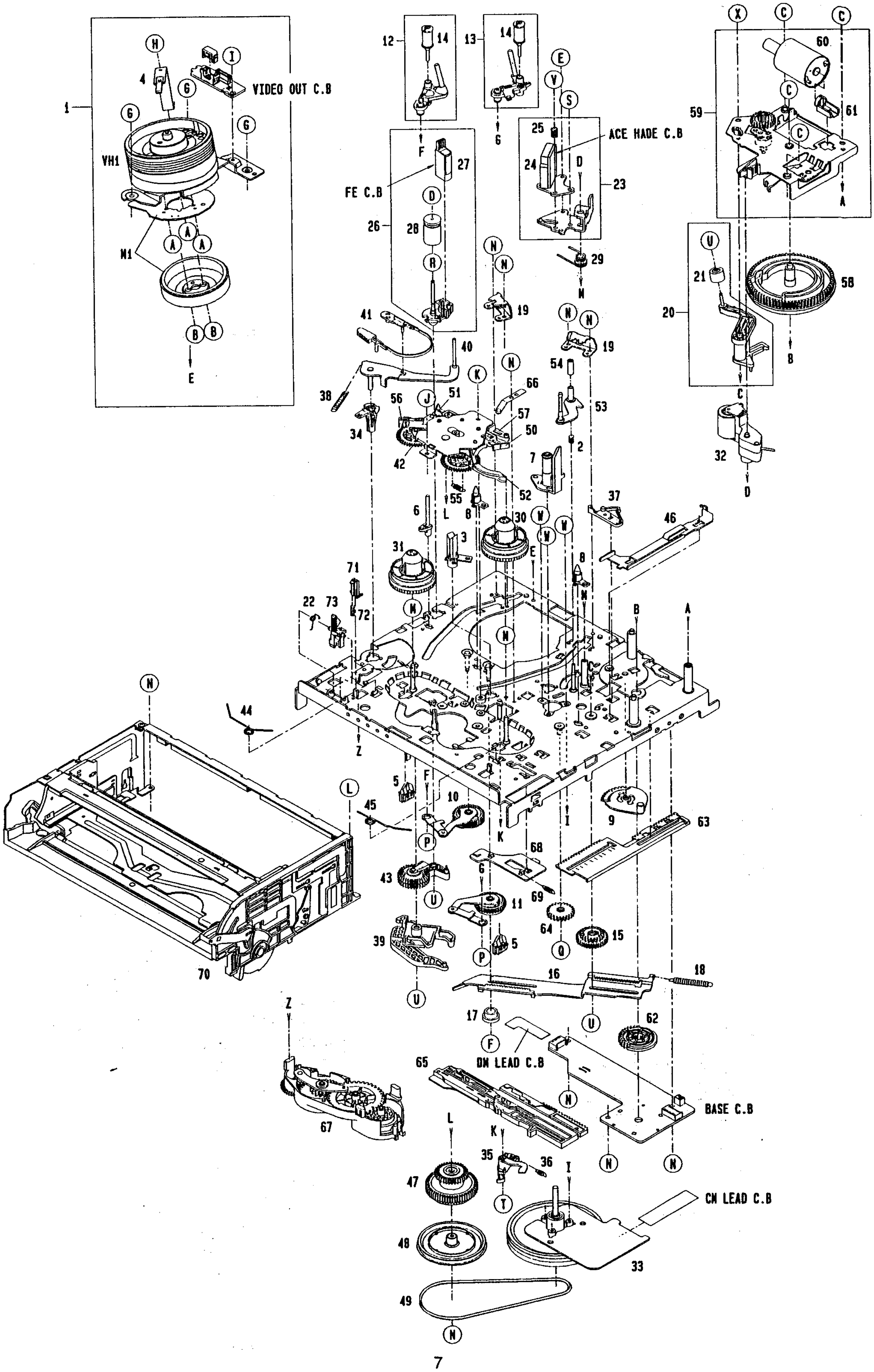


DISASSEMBLY PARTS LIST

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can’t understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
1	S8-067-017-060	--	CYLINDAR ASS'Y<208>
1	S8-066-016-030	--	CYLINDAR ASS'Y<109>
1	S8-066-016-010	--	CYLINDAR ASS'Y<107,108>
1	S8-066-016-080	--	CYLINDAR ASS'Y<110>
1	S8-065-017-010	--	CYLINDAR ASS'Y<206>
2	S8-065-170-050	--	RG ARM SPRING<110,208>
3	S8-065-130-010	--	OPTICAL LEADER
4	S8-065-015-010	--	DRUM EARTH ASS'Y
5	S8-065-133-030	--	RS LEADER
6	S8-065-023-010	--	F POST METAL ASS'Y
7	S8-065-023-020	--	TAPE GUIDE ASS'Y
8	S8-063-020-230	0E	CASSETE GUIDE BOSS
9	S8-065-035-020	--	LOADING LEVER KASIME
10	S8-063-033-050	2A	LOADING PLATE L ASS'Y
11	S8-065-033-050	--	LOADING PLATE R ASS'Y
12	S8-065-033-030	--	L BLOCK L ASS'Y
13	S8-065-033-040	--	L BLOCK R ASS'Y
14	S8-063-030-090	2A	ROLLER POST
15	S8-065-030-040	--	LOADING GEAR
16	S8-065-030-050	--	L GEAR PLATE
17	S8-065-030-110	--	L GEAR PLATE COLLOR
18	S8-065-030-100	--	L GEAR PLATE SPRING
19	S8-065-030-010	--	LD CATCHER
20	S8-065-033-060	--	HEAD CLEANING ASS'Y
21	S8-063-030-290	--	CLEANING ROLLER ASS'Y
22	S8-065-130-050	--	REC LEVER SPRING<EXCEPT 107,206>
23	S8-065-043-030	--	AC HEAD BASE ASS'Y<107,206>
23	S8-065-043-020	--	ACE HEAD BASE ASS'Y<EXCEPT 107,206>
24	S6-204-030-240	--	AC HEAD HVMZB1030(ACH1)<107,206>
24	S6-204-150-200	--	ACE HEAD HVMZA1220(ACEH1)<EXCEPT 107,206>
25	S8-000-060-040	0E	AZIMUTH SPRING
26	S8-065-043-010	--	FE HEAD BASE ASS'Y
27	S6-209-150-040	--	VTR1X2ERS11107<EXCEPT 107,206>
28	S8-063-043-060	--	IMPEDANCE ROLLER ASS'Y
29	S8-065-040-020	--	HEAD BASE SPRING
30	S8-065-053-010	--	T REEL ASS'Y
31	S8-065-053-020	--	S REEL ASS'Y
32	S8-065-063-010	--	PINCH ROLLER ARM ASS'Y
33	S6-003-030-600	--	CAPSTAN MOTOR F2QTB10 (M2)
34	S8-063-080-040	1A	BT ARM METAL
35	S8-065-073-010	--	C BRAKE ASS'Y
36	S8-065-070-020	--	C BRAKE SPRING
37	S8-065-170-040	--	RG LEVER
38	S8-065-080-020	--	BT SPRING
39	S8-065-080-060	--	BT LEVER
40	S8-065-083-020	--	TENSION ARM SEMI ASS'Y
41	S8-065-083-030	--	BT BAND ASS'Y
42	S8-065-093-030	--	SUB PLATE ASS'Y
43	S8-065-093-040	--	RF CLUTCH ASS'Y
44	S8-065-100-070	--	TS BRAKE SPRING
45	S8-065-100-090	--	SS BRAKE SPRING
46	S8-065-100-100	--	TS BRAKE LEVER
47	S8-065-093-020	--	CLUTCH ASS'Y
48	S8-065-093-010	--	CLUTCH PULLY ASS'Y
49	S8-065-090-200	--	DRIVE BELT
50	S8-065-103-010	--	T MAIN BRAKE ASS'Y
51	S8-065-103-020	--	S MAIN BRAKE ASS'Y
52	S8-065-103-030	--	T SOFT BRAKE ASS'Y
53	S8-065-175-010	--	RG ARM KASIME
54	S8-065-170-030	--	RG ADJUST NUT
55	S8-065-100-050	--	MAIN BRAKE SPRING
56	S8-065-100-080	--	S SOFT BRAKE ARM
57	S8-065-110-140	--	REVERSE LEVER PIN
58	S8-065-113-020	--	CAM GEAR ASS'Y
59	S8-065-113-010	--	CAM PLATE ASS'Y
60	S8-065-113-030	--	LOADING MOTOR ASS'Y(M3)
61	S8-065-110-110	--	MOTOR HOLDER
62	S8-065-110-040	--	M GEAR
63	S8-065-113-050	--	M GEAR PLATE ASS'Y
64	S8-065-110-070	--	M RELAY GEAR
65	S8-065-110-080	--	M SLIDE PLATE
66	S8-065-110-170	--	R LEVER SPRING PLATE
67	S8-065-153-010	--	FD GEAR CASE ASS'Y
68	S8-065-150-090	--	FD SLIDE PLATE
69	S8-065-150-100	--	FD SLIDE PLATE SP
70	S8-065-163-010	--	FRONT LOADING ASS'Y
71	S8-065-130-060	--	IN SWITCH SLIDER
72	S8-065-130-070	--	IN SW SLIDER SPRING
73	S8-065-130-040	--	REC SWITCH LEVER<EXCEPT 107,206>
A	-- -- -- -- --	--	TAMS SCREW 2.6X15
B	-- -- -- -- --	--	ROTOR SCREW B ASS'Y
C	S9-P02-260-510	0E	TAMS SCREW 2.6X5
D	S9-W02-300-500	0E	POLTSIDER WASHER(C) 1.6X3.8X0
E	S9-P09-300-610	0E	SCREW (SHARP-POINTED) 3X6
F	S9-W02-300-600	0E	POLYSLIDER WASHER(C) 2.1X5X0.
G	S9-P04-300-510	--	TAPPING SCREW 3.0X5
H	S9-P04-260-410	0E	TAPPING SCREW 2.6X4
I	S9-P12-260-640	0E	TAMS SCREW (TAPPING) S 2.6X6
J	S9-C04-265-030	--	CAMERA SCREW(TAPPING)S 2.6X5
K	-- -- -- -- --	--	TAPPING SCREW 2.0X4
L	S9-B03-260-510	0E	TAPPING SCREW(BIND) 2.6X5
M	S9-W03-301-100	0E	NYLON WASHER 2.5X5X0.3
N	S9-P04-260-510	0E	TAPPING SCREW 2.6X5
P	S9-W06-501-100	0E	HL WASHER(CUT)4.5X7X0.5
Q	S9-W06-301-000	--	HLW(C) 2.6X6X0.3
R	S9-W06-300-400	0E	HL WASHER(CUT) 1.55X4.5X0.3
S	S9-P01-260-720	0E	SCREW 2.6X7
T	S9-W02-501-000	0E	POLYSLIDER WASHER(C)2.1X5X0.5
U	S9-W02-501-100	0E	POLYSLIDER WASHER(C)2.6X6X0.5
V	S8-000-060-260	0E	AZIMATH SPRING SCREW
W	S9-P07-260-610	--	TAPPING SCREW P 2.6 X 6
X	S9-F22-260-810	--	ADJUST SCREW 2.6X8

EXPLODED VIEW



1
H
4
I
VIDEO OUT C.B
G
G
G
VH1
A
A
A
M1
B
B
E
12
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Y
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ACE HADE C.B
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43
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69
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64
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15
39
P
5
70
U
16
18
U
17
62
F
DM LEAD C.B
65
Z
67
N
BASE C.B
N
N
L
K
35
36
I
47
T
CN LEAD C.B
48
33
49
N

HOW TO ASSEMBLE THE PARTS

1. L GEAR PLATE

L GEAR PLATE (16) の取付けの際は以下 1) ～ 4) に注意すること。

1) L BLOCK R ASSY (13) と L BLOCK L ASSY (12) がアンスレッディング状態であること。
2) LOADING GEAR (15) と L GEAR PLATE (16) のマークを合わせる。
3) LOADING PLATE R ASSY (11) と L GEAR PLATE (16) のマークを合わせる。
4) LOADING LEVER KASIME (9) が矢印方向に止まるまで回転していること。

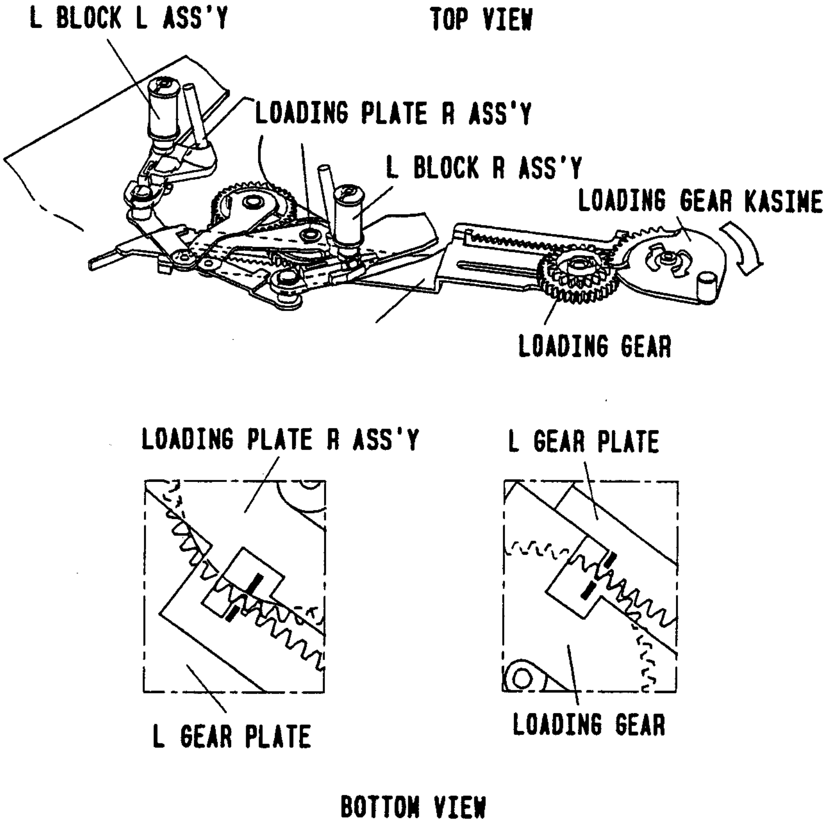

L BLOCK L ASS'Y
TOP VIEW
LOADING PLATE R ASS'Y
L BLOCK R ASS'Y
LOADING GEAR KASIME
LOADING GEAR
LOADING PLATE R ASS'Y
L GEAR PLATE
L GEAR PLATE
LOADING GEAR
BOTTOM VIEW

Fig-1

2. ACE HEAD BASE ASSY

1) ビス Ⓥ を完全に締めつけ、※部が平行になるようにビス Ⓢ を締めながら調整する。

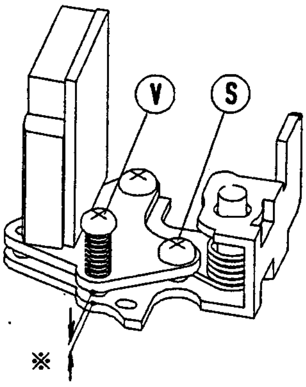


Fig-2

3. RF CLUTCH ASSY

1) M SLIDE PLATE (65) の構に RF CLUTCH ASSY (43) のシャフトを入れる。

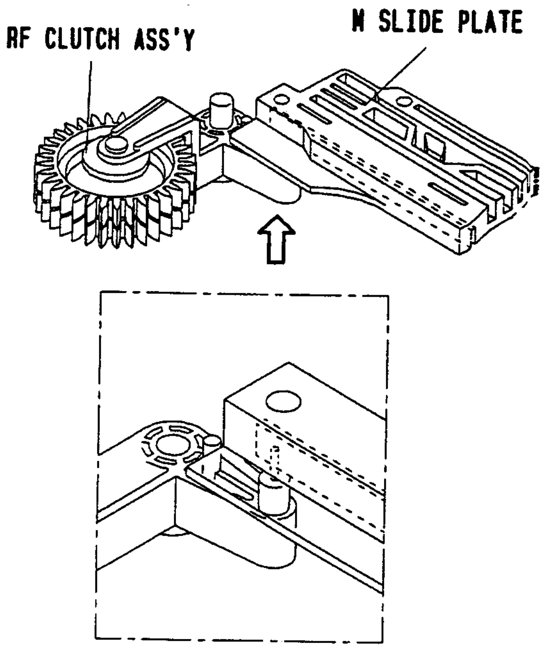

RF CLUTCH ASS'Y
M SLIDE PLATE

Fig-3

4. FD SLIDE PLATE SP

1) FD GEAR 1とFD GEAR 2のマークを合わせる。

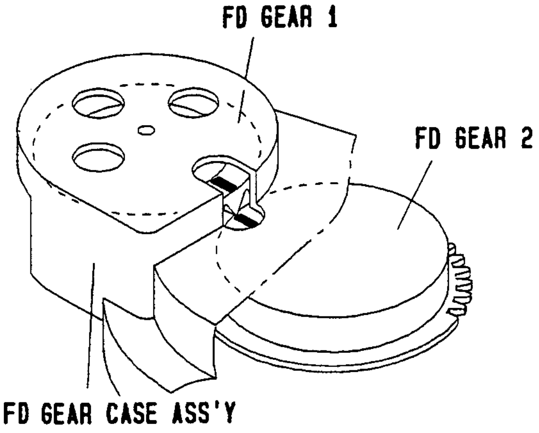

FD GEAR 1
FD GEAR 2
FD GEAR CASE ASS'Y

Fig-4

2) FD SLIDE PLATE (68) を取り付ける時、突起部分がFig-5 ①、②の様に溝に入ること。

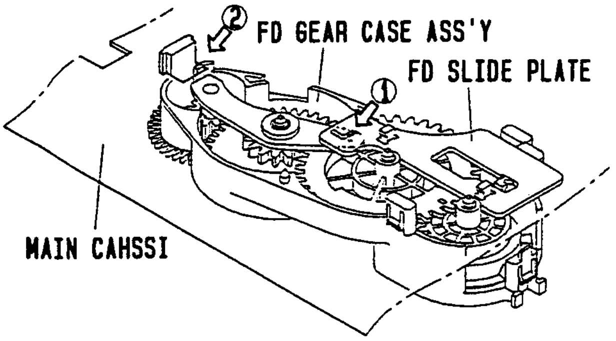

②
FD GEAR CASE ASS'Y
①
FD SLIDE PLATE
MAIN CAHSSI

Fig-5

5. M SLIDE PLATE/M RELAY GEAR/M GEAR PLATE ASSY/M GEAR

1) M GEAR PLATE ASSY (63) とM GEAR (62) のマークを合わせて取り付ける。
2) M RELAY GEAR (64) は、M SLIDE PLATE (65) のマークと合わせて取り付ける。

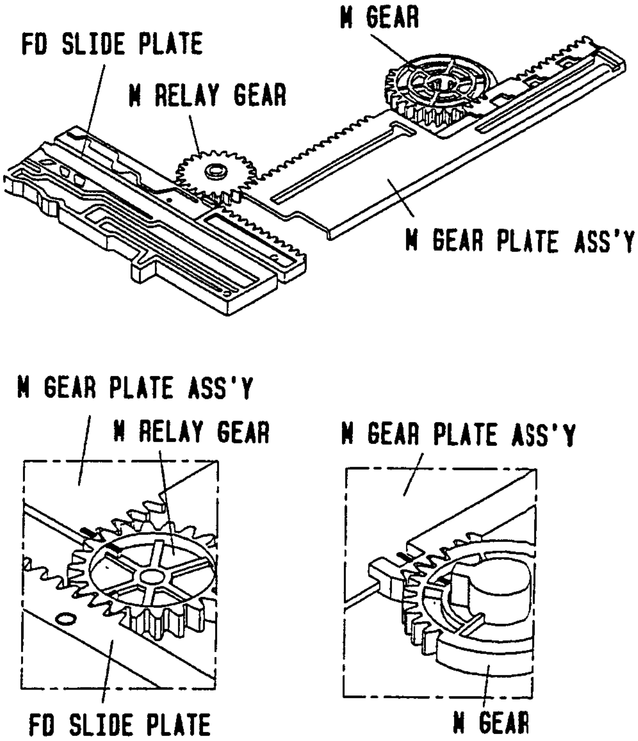

M GEAR
FD SLIDE PLATE
M RELAY GEAR
M GEAR PLATE ASS'Y
M GEAR PLATE ASS'Y
M RELAY GEAR
M GEAR PLATE ASS'Y
FD SLIDE PLATE
M GEAR

Fig-6

6. SUB PLATE ASSY

1) S SOFT BRAKE ARM (56) のシャフトを MAIN CHASSIS の①部に入れる。
2) S MAIN BRAKE ASSY (51) のシャフトを M SLIDE PLATE (65) のカム溝2部に入れる。
3) T SOFT BRAKE ASSY のシャフトを MAIN CHASSIS の④部に入れる。
4) T MAIN BRAKE ASSY (50) のシャフトを MAIN CHASSIS の③部に入れる。
5) REVERSE LEVER PIN (57) のシャフトを M SLIDE PLATE のカム構⑤部に入れる。

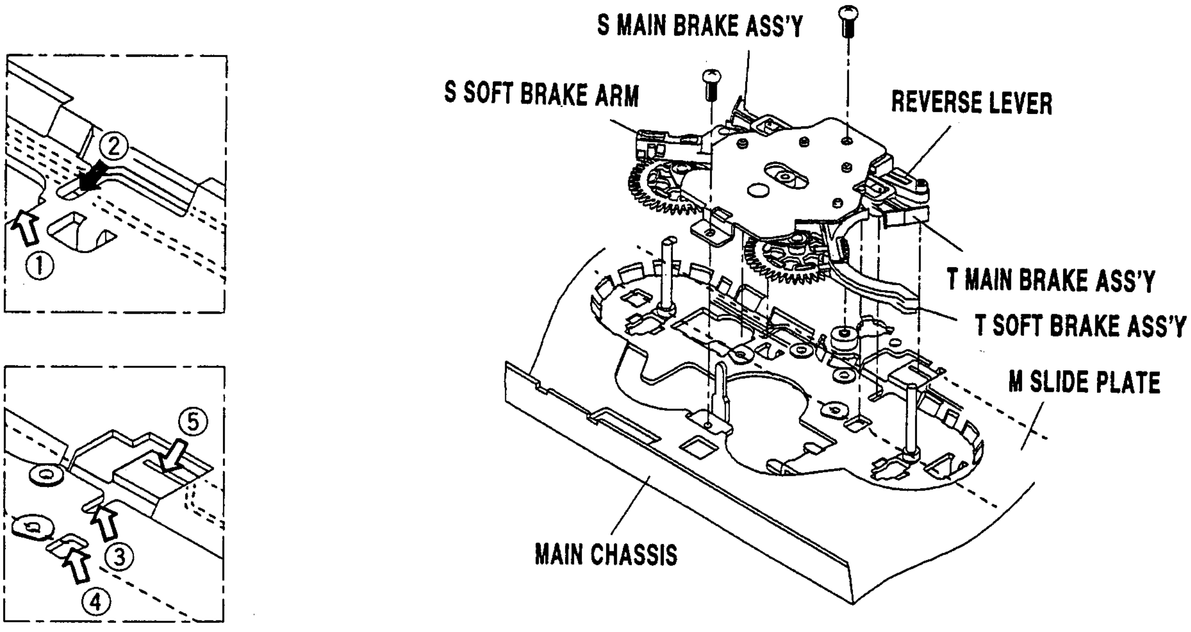

②
①
⑤
③
④
S MAIN BRAKE ASS'Y
S SOFT BRAKE ARM
REVERSE LEVER
T MAIN BRAKE ASS'Y
T SOFT BRAKE ASS'Y
M SLIDE PLATE
MAIN CHASSIS

Fig-7

7. CAM GEAR ASSY と LOADING LEVER KASIME

1) メカがアンスレッディング状態であることを確認する。
2) CAM GEAR ASSY (58) の裏側のカム溝に LOADING LEVER KASIME (9) のポストに入る様に取り付ける。

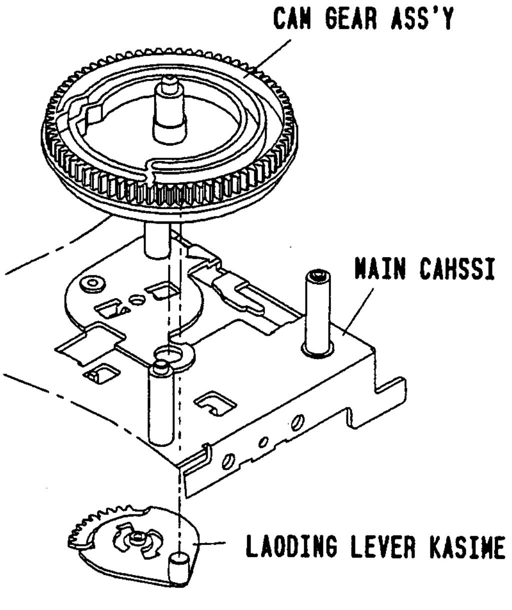

CAM GEAR ASS'Y
MAIN CAHSSI
LAODING LEVER KASIME

Fig-8

8. HEAD CLEANING ASSY

1) HEAD CLEANING ASSY (20) は、レバーの位置が矢印部分に組み込まれること。(誤った位置にレバーが組み込まれると正常に動作しません。)

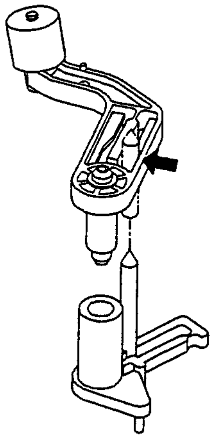


Fig-9

9. FRONT LOADING ASSY

1) CASSETTE HOLDER ASSY は、カセット IN 状態で FRAME R BLOCK、FRAME L BLOCK に取り付ける。

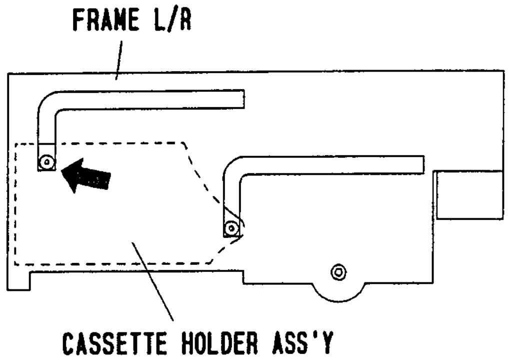

FRAME L/R
CASSETTE HOLDER ASS'Y

Fig-10

2) CASSETTE HOLDER ASSY を FRAME L、FRAME R に取り付ける。
3) シャフトがレバーの右側にくる様に取り付ける。

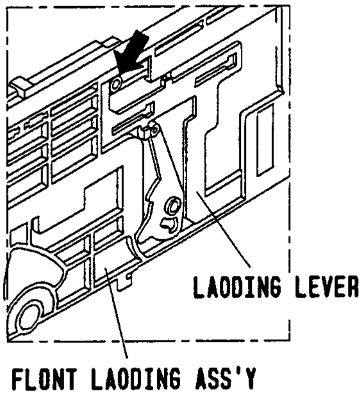

LAODING LEVER
FLONT LAODING ASS'Y

Fig-11

4) FD SLIDE PLATE SP (69) を参考にギアの位相がずれない様に FRONT LOADING ASSY (70) を取り付ける。

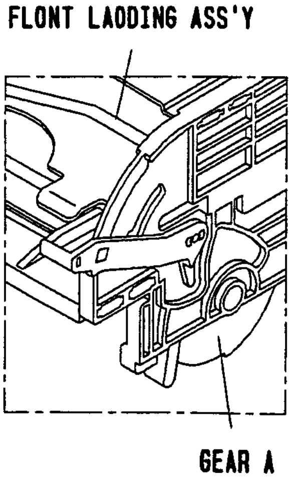

FLONT LAODING ASS'Y
GEAR A

Fig-12

〈注意〉
すべての組み立てが終了時、手動にて CASSETTE HOLDER ASSY をローディング、アンローディングさせて下さい。その際、キャプスタンモータが連動して回転する事を確認して下さい。うまくいかない場合 "5. MSLIDE PLATE/MRELAY GEAR/ M GEAR PLATE ASSY/M GEAR" の位相合わせを再確認して下さい。

10. CAM PLATE ASSYの取り付け

CAM PLATE ASSYはPINCH ROLLER ASSY, CAM GEAR ASSY, HEAD CLEANING ASSYの軸をそれぞれⓒⓓⓔに組み込みます。そしてⓐ×2、ⓑ×2の4本のビスで止めます。その時以下の点に注意して下さい。(8. HEAD CLEANING ASSYを参照)

1) AC HEAD ASSYは①方向に押し下げながら、更に②方向に止まるまで回す。(CAM PLATE ASSYの取り付けが完了するまでこの状態を保持する。)
2) CAM GEAR ASSYを③方向に止まるまで回す。(CAM PLATE ASSYの取り付けが完了するまでこの状態を保持する。)
3) Ⓐで示すLEVERの溝に、Ⓑで示すPINCH ROLLER ASSYのスプリングが入ること。
4) LEVERの軸（Ⓐ点の反対側）が、④で示すように、CAM GEAR ASSYの溝に入ること。
5) CAM PLATE ASSYのCAMがⓕで示すシャーシの穴に入ること。

以上1)～5)の全てが満たされないと、CAM PLATE ASSYをうまく取り付けることはできません。

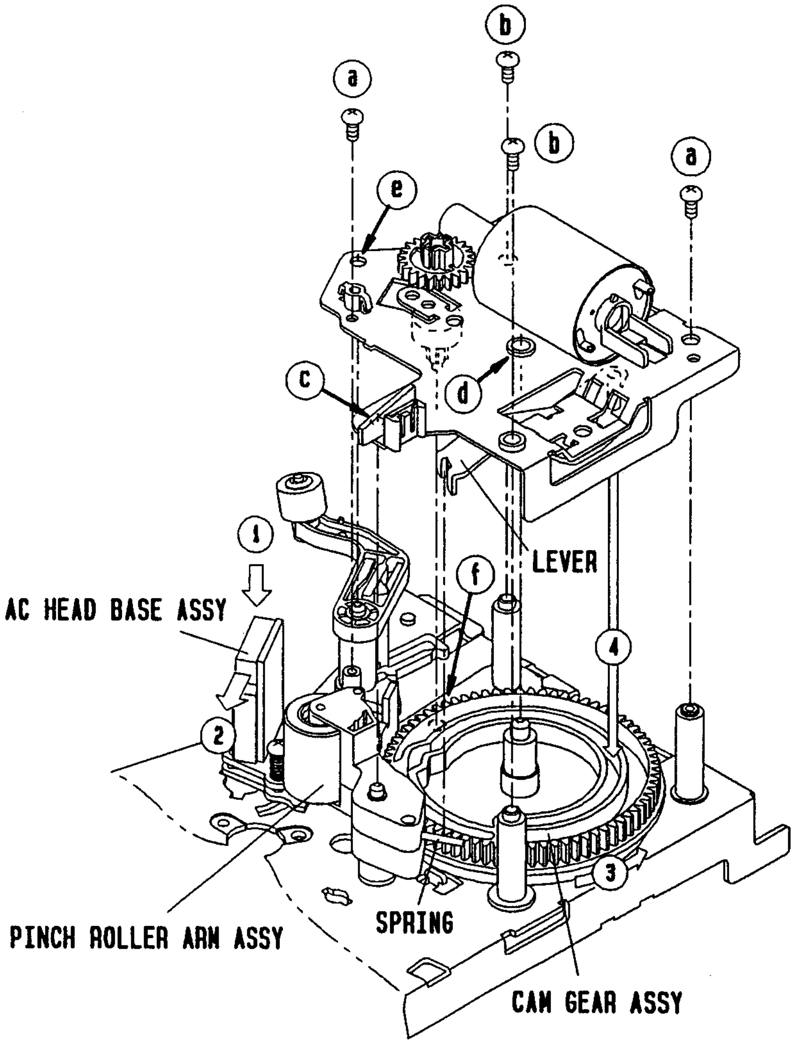

b
a
b
a
e
c
d
LEVER
1
f
4
AC HEAD BASE ASSY
2
3
SPRING
PINCH ROLLER ARM ASSY
CAM GEAR ASSY

Fig-13

HOW TO ASSEMBLE THE PARTS

1. L GEAR PLATE

Observe the following precautions when attaching the L GEAR PLATE (16).

1) Confirm that the BLOCK R. ASSY (13) and the BLOCK L. ASSY (12) are located in the unthreaded-end positions.
2) Align the marks of the LOADING GEAR (15) and the L GEAR PLATE (16).
3) Align the marks of the LOADING PLATE R ASSY (11) and the L GEAR PLATE (16).
4) Check that the LOADING LEVER KASIME (9) has been turned until it is stopped in the direction of the arrow.

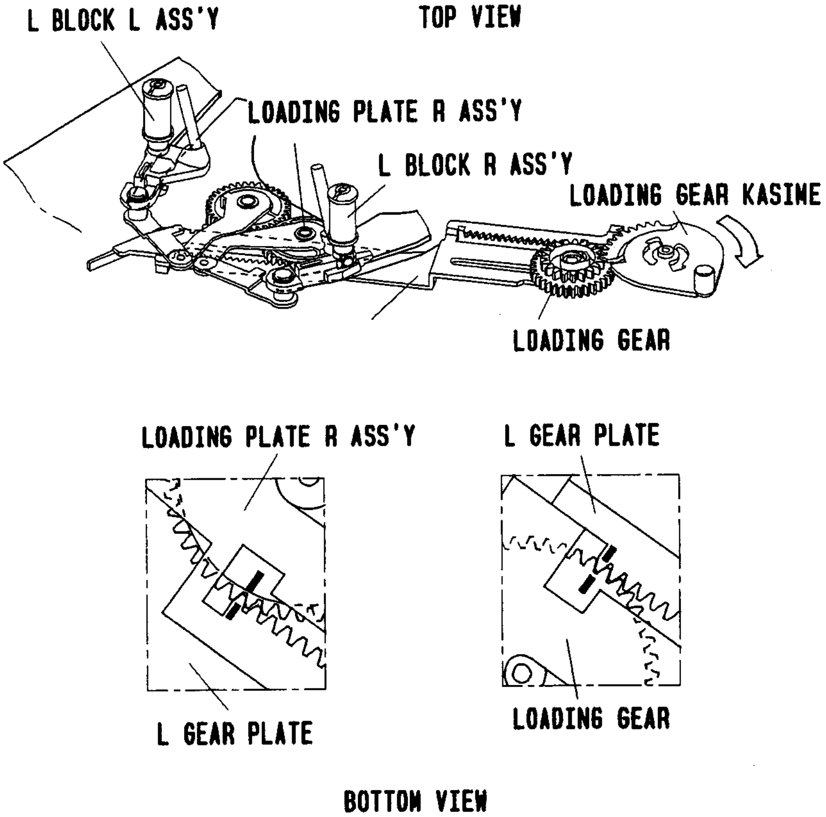

L BLOCK L ASS'Y
TOP VIEW
LOADING PLATE R ASS'Y
L BLOCK R ASS'Y
LOADING GEAR KASIME
LOADING GEAR
LOADING PLATE R ASS'Y
L GEAR PLATE
L GEAR PLATE
LOADING GEAR
BOTTOM VIEW

Fig-1

2. ACE HEAD BASE ASSY

1) Tighten the screw V completely then make adjustment until the asterisk * mark position becomes parallel, while tightening the screw S.

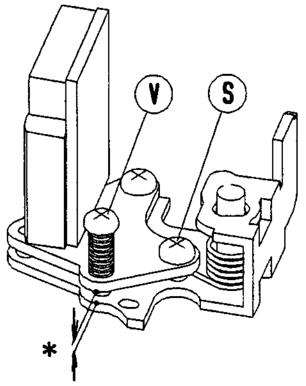


Fig-2

3. RF CLUTCH ASSY

1) Insert the shaft of the RF CLUTCH ASSY (43) next to the M SLIDE PLATE (65).

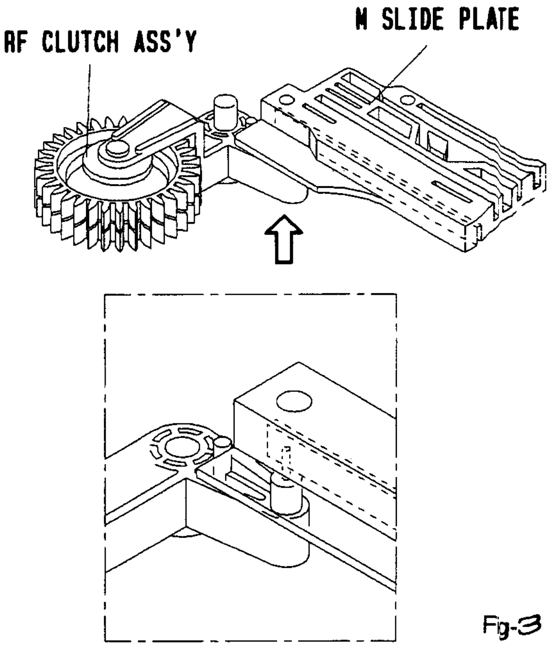

RF CLUTCH ASS'Y
M SLIDE PLATE

Fig-3

4. FL SLIDE PLATE SP

1) Align the marks of the FD GEAR 1 and the FD GEAR 2.

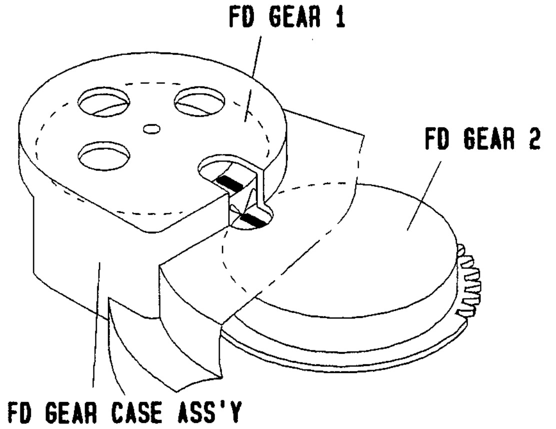

FD GEAR 1
FD GEAR 2
FD GEAR CASE ASS'Y

Fig-4

2) When attaching the FD SLIDE PLATE (68), insert the protrusion parts into the groove as shown in Fig. 5 (1) and (2).

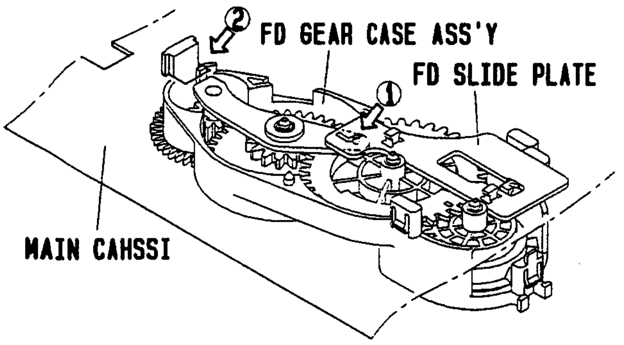

②
FD GEAR CASE ASS'Y
①
FD SLIDE PLATE
MAIN CAHSSI

Fig-5

5. M SLIDE PLATE/M RELAY GEAR/M GEAR PLATE ASSY/M GEAR

1) Align the marks of the M GEAR PLATE ASSY (63) and the M GEAR (62).
2) Attach the M RELAY GEAR (64) while aligning the marks of the M RELAY GEAR (64) and the M SLIDE PLATE (65).

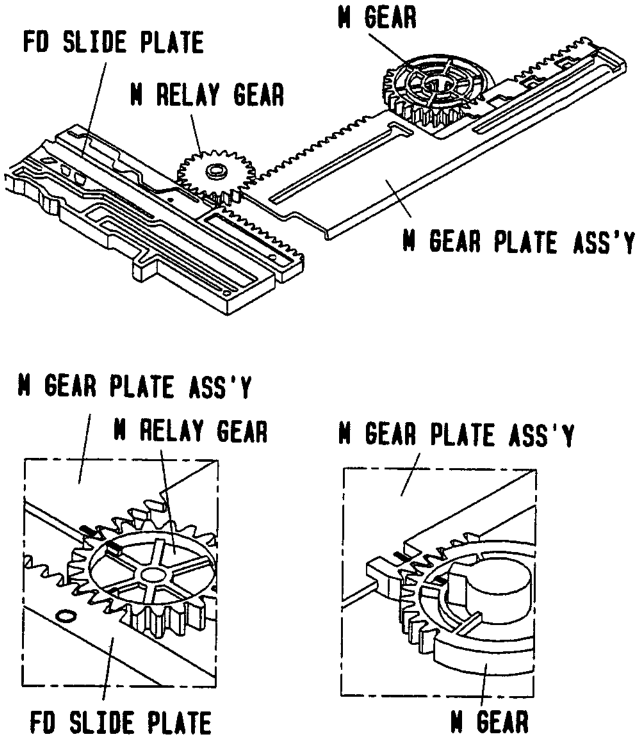

M GEAR
FD SLIDE PLATE
M RELAY GEAR
M GEAR PLATE ASS'Y
M GEAR PLATE ASS'Y
M RELAY GEAR
M GEAR PLATE ASS'Y
FD SLIDE PLATE
M GEAR

Fig-6

6. SUB PLATE ASSY

1) Insert the shaft of the S SOFT BRAKE ARM (56) into the (1) portion of the MAIN CHASSIS.
2) Insert the shaft of the S MAIN BRAKE ASSY (51) to the cam groove (2) portion of the M SLIDE PLATE (65).
3) Insert the shaft of the T SOFT BRAKE ASSY into the 4 portion of the MIN CHASSIS.
4) Insert the shaft of the T MAIN BRAKE ASSY (50) into the (3) portion of the MAIN CHASSIS.
5) Insert the shaft of the REVERSE LEVER PIN (57) into the cam groove (5) portion of the M SLIDE PLATE.

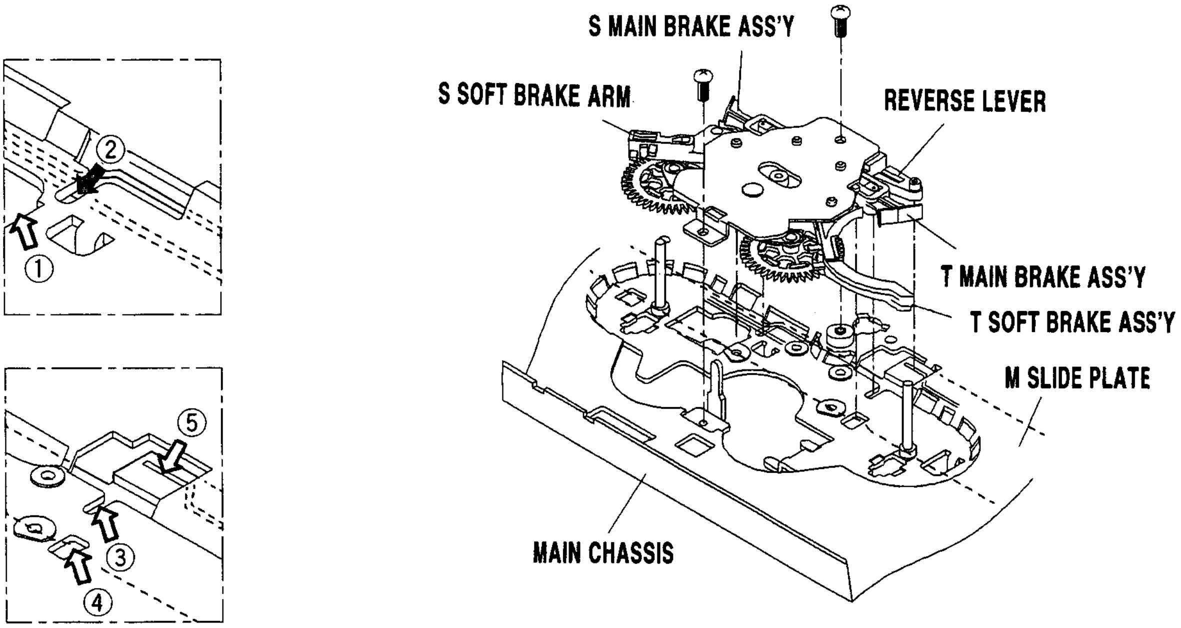

②
①
⑤
③
④
S MAIN BRAKE ASS'Y
S SOFT BRAKE ARM
REVERSE LEVER
T MAIN BRAKE ASS'Y
T SOFT BRAKE ASS'Y
M SLIDE PLATE
MAIN CHASSIS

Fig-7

7. CAM GEAR ASSY and LOADING LEVER KASIME

1) Confirm that the mechanism is in the unthreaded-end state.
2) Attach the CAM GEAR ASSY and LOADING LEVER KASIME so that the post of the LOADING LEVER KASIME (9) is inserted to the rear of the CAM GEAR ASSY (58).

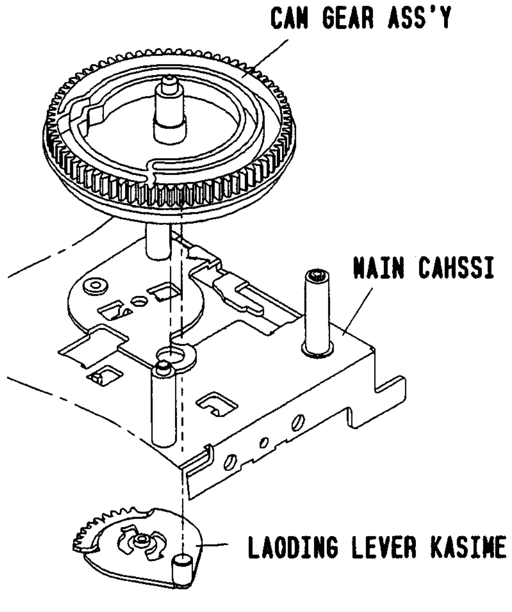

CAM GEAR ASS'Y
MAIN CAHSSI
LAODING LEVER KASIME

Fig-8

8. HEAD CLEANING ASSY

1) The HEAD CLEANING ASSY (20) must be attached so that the lever is positioned in the area marked by the arrow.
(If the lever is attached to the incorrect position, the machine will not work correctly.)

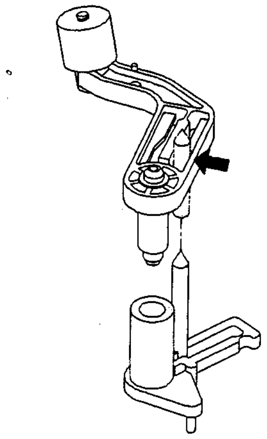


Fig-9

9. FRONT LOADING ASSY

1) Establish the "Cassette In" state of mechanism. Insert the CASSETTE HOLDER ASSY to the FRAME R BLOCK and to the FRAME L BLOCK with the "Cassette In" state of mechanism.

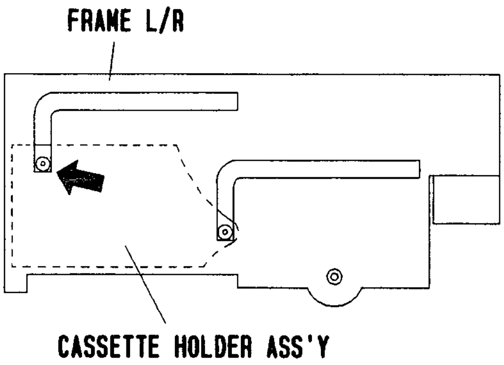


Fig-10

2) Attach the CASSETTE HOLDER ASSY to the FRAME L and the FRAME R.
3) Be careful that the shaft comes to the right of the lever when attaching the CASSETTE HOLDER ASSY.

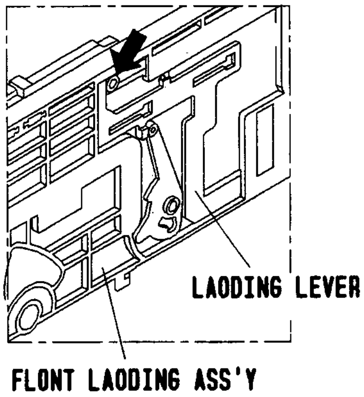


Fig-11

4) Attach the FRONT LOADING ASSY (70) while referring to the FD SLIDE PLATE SP (69) so that the phase of the gear must not be shifted.

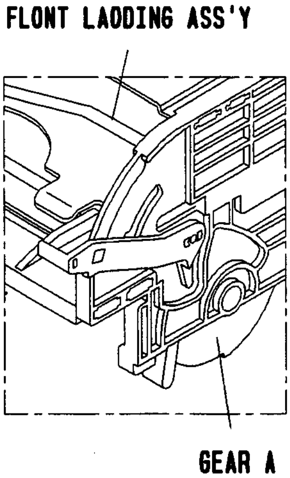


Fig-12

< Note >

When all parts are assembled, perform loading and unloading of the CASSETTE HOLDER ASSY manually by hand. Confirm that the capstan motor rotates as the loading and unloading are performed. If the capstan motor does not rotates, check the phase adjustment referring to section "5. M SLIDE PLATE/M RELAY GEAR/M GEAR PLATE ASSY/M GEAR"

10. Attaching the COM PLATE ASSY

Attach the CAM PLATE ASSY by inserting the respective shafts of the PINCH ROLLER ASSY, CAM GEAR ASSY and HEAD CLEANING ASSY into ⓒ, ⓓ and ⓔ respectively. Then fix it using the 2 screws ⓐ and 4 screws ⓑ. When attaching it, pay attention on the following point.
(Refer to 8. HEAD CLEANING ASSY.)

1) While pressing down the AC HEAD ASSY in the direction of ①, turn it in the direction ② until it stops. (Maintain this position until attachment of the CAM PLATE ASSY is completed.)
2) Turn the CAM GEAR ASSY in the direction of ③ until it stops. (Maintain this position until attachment of the CAM PLATE ASSY is completed.)
3) Spring of the PINCH ROLLER ASSY shown as Ⓑ must enters into the groove of the LEVER shown as Ⓐ.
4) Shaft (opposite side of point Ⓐ) of the LEVER must enter into the groove of the CAM GEAR ASSY as shown in ④.
5) The CAM of the CAM PLATE ASSY must enter into the hole of chassis as shown in ⓕ.

If all of the conditions as described above from step 1) to step 5) are not satisfied, the CAM PLATE ASSY cannot be attached correctly.

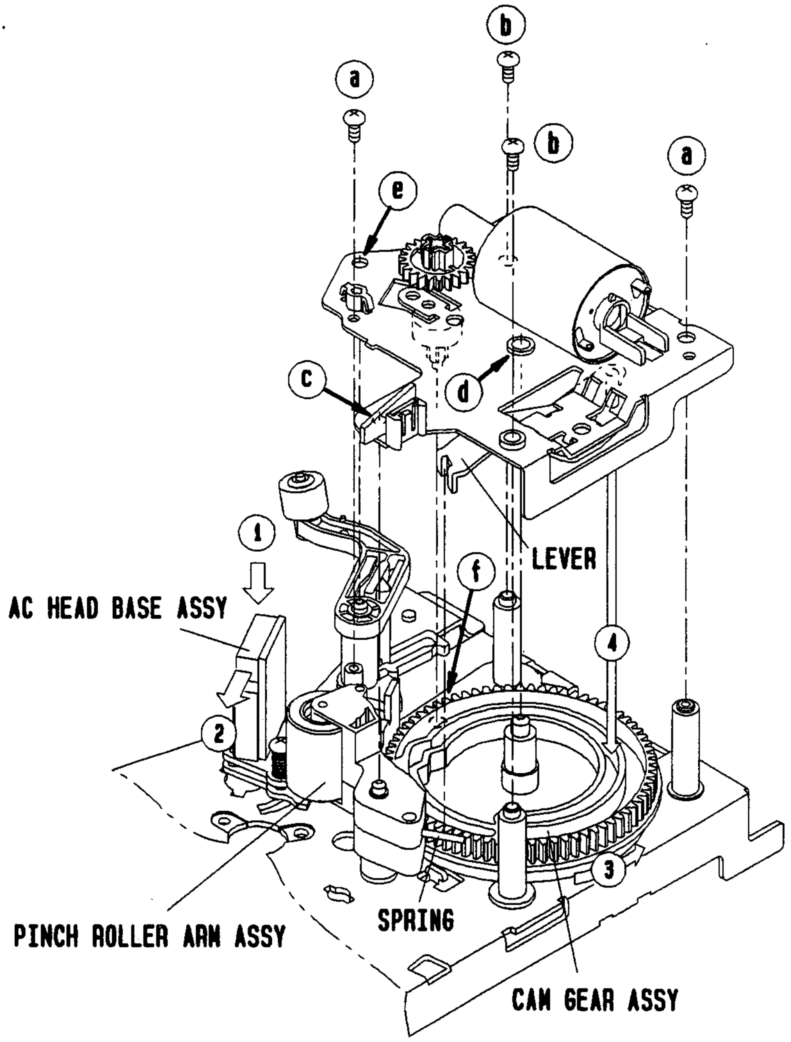


Fig-13

ELECTRICAL ADJUSTMENT

1. TAPE TRANSPORT ADJUSTMENT

1. 粗調整

1) 調整箇所（Fig-1 参照）
   - Ⓐ L BLOCK L ASSY
   - Ⓑ L BLOCK R ASSY
   - Ⓒ TAPE GUIDE ASSY

2) チェック方法

① カセットケースのフタを外した生テープを入れ再生する。

② Ⓐ～Ⓒの各ガイドのテープ走行中にカールのない事をチェックする。(Fig-2 参照)
Ⓒ TAPE GUIDE ASSY にカールがある時は、3項の傾き調整をする。
テープの下端がドラムリードに沿ってスムーズに走行する事をチェックする。

※ この時、PLAY/STOP を数回繰返しチェックする事。

2. FMエンベロープの調整

1) オシロスコープの接続方法

CH-1 ...... PBY 信号
（接続箇所は機種マニュアル参照）
CH-2 ...... HSW-V (RF SWP)
（接続箇所は機種マニュアル参照）

※ トリガーは、CH-2、TIME レンジは 5m sec/div にする。

2) 調整方法

① トラッキングをマニュアルセンター位置にする。

② Ⓐ L BLOCK L ASSY、Ⓑ L BLOCK R ASSY が軽く回転する程度にロックビスをゆるめる。(Fig-3 参照)

③ FM エンベロープの波形が、平坦になる様、Ⓐ L BLOCK L ASSY、Ⓑ L BLOCK R ASSY を調整する。(Fig-4 参照)

※ PB、CUE/REV、ポーズを繰り返し、波形がすぐ平坦に復帰する事を確認する。

④ FM エンベロープ調整後ロックビスを締める。

⑤ ロックビスをネジロックで固定する。

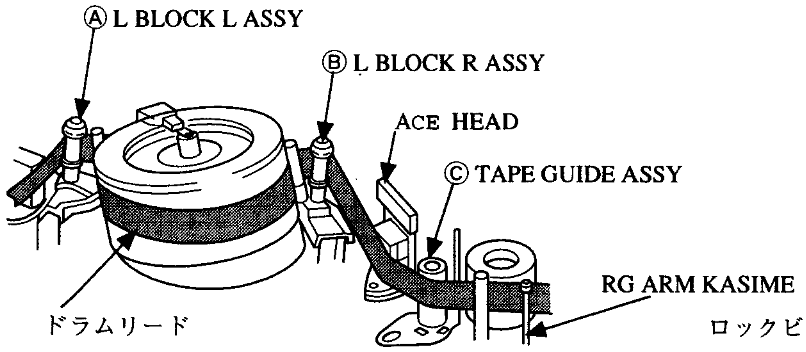

Ⓐ L BLOCK L ASSY
Ⓑ L BLOCK R ASSY
ACE HEAD
Ⓒ TAPE GUIDE ASSY
RG ARM KASIME
ドラムリード

Fig-1

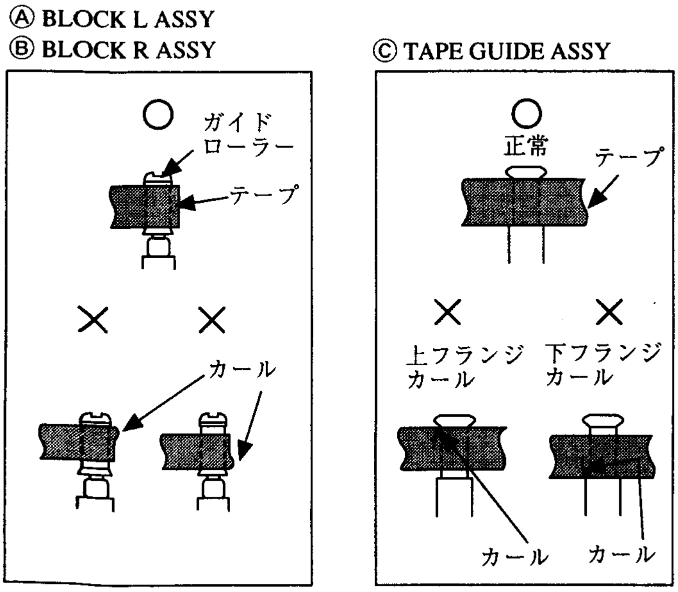

Ⓐ BLOCK L ASSY
Ⓑ BLOCK R ASSY
○
ガイドローラー
テープ
×
×
カール
Ⓒ TAPE GUIDE ASSY
○
正常
テープ
×
×
上フランジカール
下フランジカール
カール
カール

Fig-2

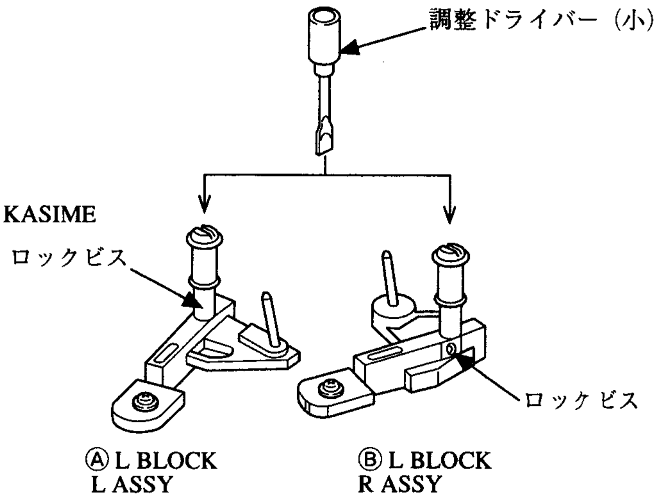

調整ドライバー（小）
ロックビス
ロックビス
Ⓐ L BLOCK L ASSY
Ⓑ L BLOCK R ASSY

Fig-3

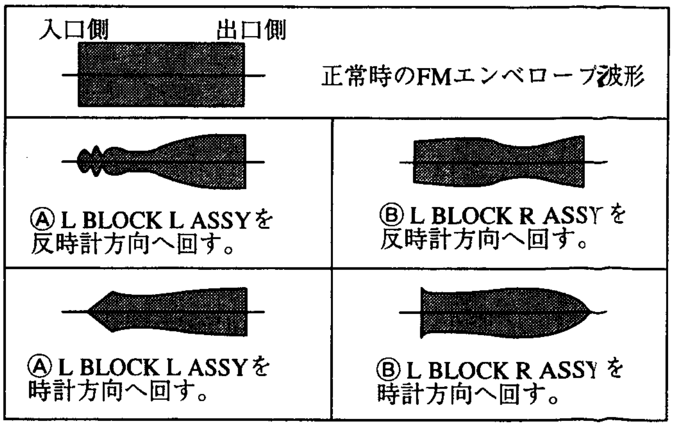

入口側
出口側
正常時のFMエンベロープ波形
Ⓐ L BLOCK L ASSYを反時計方向へ回す。
Ⓑ L BLOCK R ASSYを反時計方向へ回す。
Ⓐ L BLOCK L ASSYを時計方向へ回す。
Ⓑ L BLOCK R ASSYを時計方向へ回す。

Fig-4

3. ACEヘッド調整（Fig-5参照）

1) **傾き調整方法**
   - ① カセットケースのフタを外した生テープを入れ再生する。
   - ② チルト調整ビスを時計方向に回し、© TAPE GUIDE ASSYの下フランジにカールをつくる。(Fig-2参照)
   - ③ C TAPE GUIDE ASSYの下フランジにカールがなくなる時点までチルト調整ビスを反時計方向に回す。

2) **高さ調整方法**
   - ① オシロスコープをAUDIO OUT端子に接続する。
   - ※ TIMEレンジは0.5m sec/divにする。
   - ② アライメントテープを再生する。
   - ③ 波形が最大になる様、高さ調整ビスを調整する。

3) **アジマス調整方法**
   - ① 高さ調整と同様にオシロスコープを接続する。
   - ② アライメントテープを再生する。
   - ③ 波形が最大になる様、アジマス調整ビスを調整する。

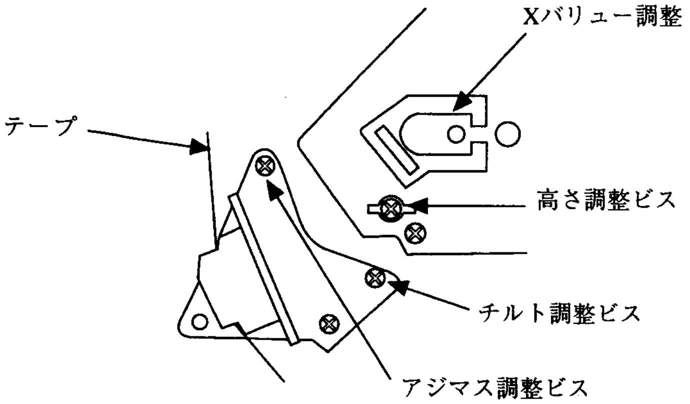

Xバリュー調整
テープ
高さ調整ビス
チルト調整ビス
アジマス調整ビス

Fig-5

4. Xバリュー調整

1) **FMエンベロープ調整と同様に、オシロスコープを接続する。**

2) **調整方法**
   - ① トラッキングをマニュアルセンター位置にする。
   - ② FMエンベロープ波形が最大になる様、Xバリュー調整をする。
   - ③ トラッキングボリュームをセンター位置から＋方向もしくは、－方向に可変し、波形が平坦なまま、振幅レベルが下がる事を確認する。

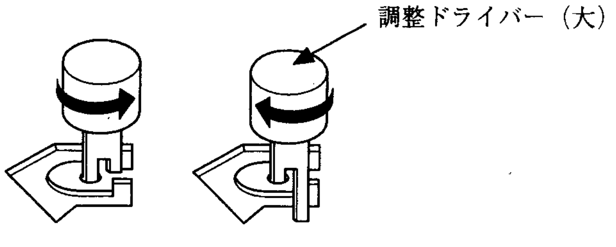


Fig-6

5. RGポスト高さ調整

1) **カセットケースのフタを外した生テープを入れ、REVIEWにする。**

2) **調整方法**
   - ① RGポスト高さ調整ビスを時計方向に回し、© TAPE GUIDE ASSYの下フランジにカールをつくる。(Fig-2、Fig-6参照)
   - ② © TAPE GUIDE ASSYの下フランジにカールがなくなる時点まで、RGポスト高さ調整ビスを反時計方向に回す。
   - ※ RGポストにカールが出来ないところREVIEW時、画が縦ゆれしないところに調整する。

6. 確認

1) **Ⓐ～©の各ガイドにカールがない事を確認する。カールがある時は、2項FMエンベロープ調整から繰り返し調整する。**

2) **調整終了後ロックビス、チルト調整ビスをネジロックで固定する。**

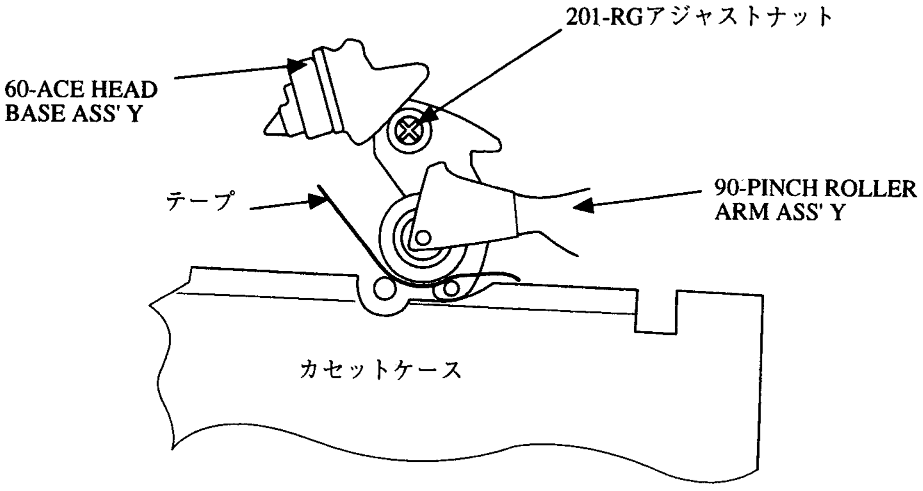

201-RGアジャストナット
60-ACE HEAD BASE ASS' Y
テープ
90-PINCH ROLLER ARM ASS' Y
カセットケース

Fig-7

ELECTRICAL ADJUSTMENT

1. TAPE TRANSPORT ADJUSTMENT

1. Coarse Adjustment

1) Adjustment Points (Refer to Fig-1.)
   - Ⓐ L BLOCK L ASSY
   - Ⓑ L BLOCK R ASSY
   - Ⓒ TAPE GUIDE ASSY

2) Check Procedure

   ① Prepare a recording tape from which the cassette case lid is removed. Insert the recording tape without cassette lid into the machine and establish the playback mode.

   ② Check that the tape has no curl at each guide from Ⓐ to Ⓒ when the tape is running. (See Fig-2.)
   If tape curl is observed at the TAPE GUIDE ASSY Ⓒ, perform the slant adjustment of step 1) Slantness Adjustment Procedure of the following item 3. ACE HEAD ADJUSTMENT.
   Check that bottom edge of the tape runs along with the drum rabbet guide of the drum smoothly.

* Repeat PLAY and STOP modes several times and check the tape curl.

2. FM ENVELOPE ADJUSTMENT

1) Oscilloscope Connection Procedure

CH-1 ...... Connect to the PB Y signal.
(Refer to the Service Manual of individual model for exact connection point.)
CH-2 ...... Connect to the HSW-V (RF SWP) signal.
(Refer to the Service Manual of individual model for exact connection point.)

* Trigger an oscilloscope internally from CH-2 with the TIME range of 5 msec/div.

2) Adjustment Procedure

   ① Set the Tracking to the MANUAL mechanical center position.

   ② Loosen the locking screws (referring to Fig-3) until the L BLOCK L ASSY Ⓐ and the L BLOCK R ASSY are gently rotatable.

   ③ Adjust the L BLOCK L ASSY Ⓐ and the L BLOCK R ASSY until the FM envelope waveform becomes flat. (Refer to Fig-4.)

* Repeat the PB, CUE/REV and PAUSE modes, and confirm that the waveform return to the flat shape immediately.

   ④ After completing the FM envelope adjustment, tighten the locking screw.

   ⑤ Apply the Neji-lock to the locking screw.

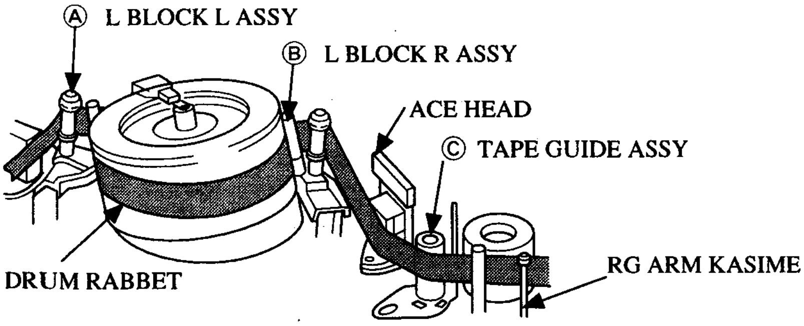
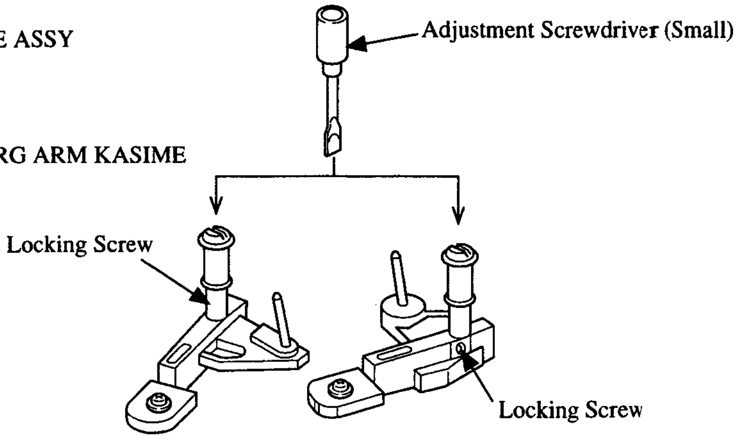

Ⓐ L BLOCK L ASSY
Ⓑ L BLOCK R ASSY
ACE HEAD
Ⓒ TAPE GUIDE ASSY
DRUM RABBET
RG ARM KASIME

Fig-1


Adjustment Screwdriver (Small)
Locking Screw
Locking Screw

Ⓐ L BLOCK L ASSY Ⓑ L BLOCK R ASSY

Fig-3

Ⓐ L BLOCK L ASSY
Ⓑ L BLOCK R ASSY

Ⓒ TAPE GUIDE ASSY

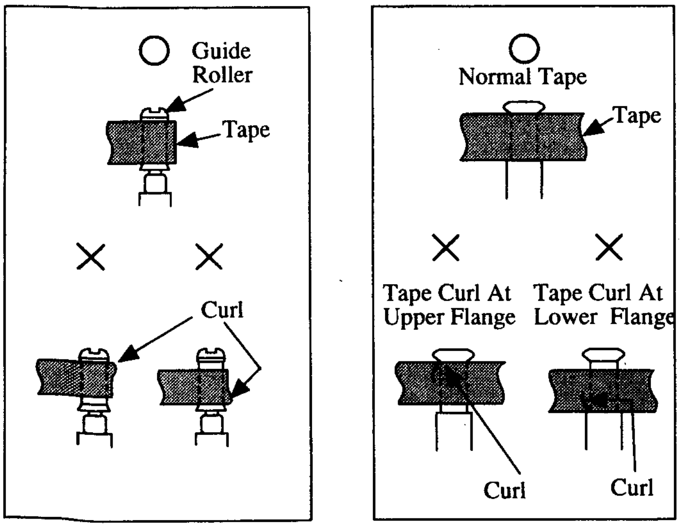

○ Guide Roller
Tape
×
×
Curl
○
Normal Tape
Tape
×
×
Tape Curl At Upper Flange
Tape Curl At Lower Flange
Curl
Curl

Fig-2

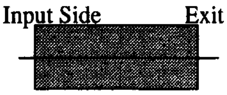
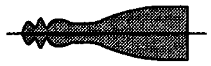
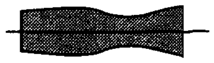
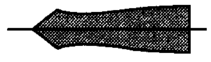
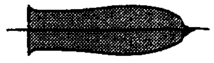
 Input Side Exit Side	FM envelope waveform when the machine is correctly adjusted.
 Turn the ⒶL BLOCK L ASSY counter-clockwise.	 Turn the ⒷL BLOCK R ASSY counter-clockwise.
 Turn the ⒶL BLOCK L ASSY clockwise.	 Turn the ⒷL BLOCK R ASSY clockwise.

Fig-4

3. ACE HEAD ADJUSTMENT (Refer to Fig-5.)

1) Slantness Adjustment Procedure
   ① Insert the recording tape without cassette lid, into the machine and establish the playback mode.
   ② Turn the tilt adjustment screw clockwise until tape curl is generated at the lower flange of the TAPE GUIDE ASSY Ⓒ. (Refer to Fig-2.)
   ③ Turn the tilt adjustment screw counter-clockwise until tape curl disappears at the lower flange of the TAPE GUIDE ASSY Ⓒ.
2) Height Adjustment Procedure
   ① Connect an oscilloscope to the AUDIO OUT terminal.
   * Set the TIME range of an oscilloscope to 5 msec/div.
   ② Playback the alignment tape.
   ③ Adjust the height adjustment screw until the waveform has the maximum amplitude.
3) Azimuth Adjustment Procedure
   ① Connect an oscilloscope in the same way as the previous item "2) Height Adjustment Procedure".
   ② Playback the alignment tape.
   ③ Adjust the height adjustment screw until the waveform has the maximum amplitude.

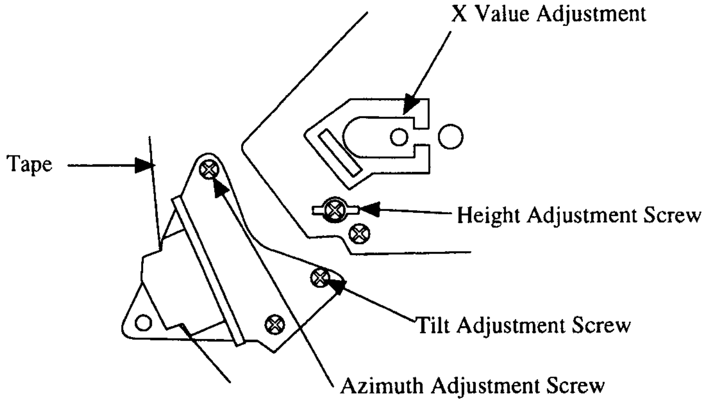


Fig-5

4. X VALUE ADJUSTMENT

1) Connect an oscilloscope in the same way as the previous section "2. FM ENVELOPE ADJUSTMENT".
2) Adjustment Procedure
   ① Set the Tracking to the MANUAL mechanical center position.
   ② Adjust the X value adjustment point until the FM envelope waveform has the maximum amplitude.
   ③ Turn the Tracking volume control in the direction of either "+" or "-" from the mechanical center position, and confirm that amplitude of the waveform decreases while maintaining the flat wave shape.

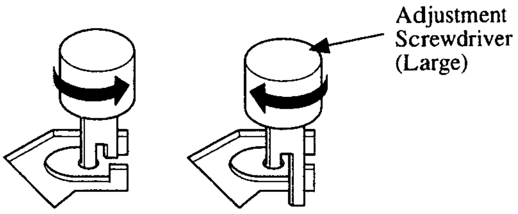


Fig-6

5. RG POST HEIGHT ADJUSTMENT

1) Insert the recording tape without cassette lid, into the machine and establish the REVIEW mode.
2) Adjustment Procedure
   ① Turn the RG post height adjustment screw clockwise until tape curl is generated at the lower flange of the TAPE GUIDE ASSY Ⓒ. (Refer to Fig-2 and Fig-6.)
   ② Turn the RG post height adjustment screw counter-clockwise until tape curl disappears at the lower flange of the TAPE GUIDE ASSY Ⓒ.
   * When performing this adjustment, find the adjustment point where tape curl disappears and the playback picture does not have vertical shaking during REVIEW mode.

6. CHECK

1) Check that there is no tape curl at the respective tape guides from Ⓐ to Ⓒ. If tape curl is observed, repeat adjustment starting from the section "2. FM ENVELOPE ADJUSTMENT".
2) Apply the Neji-lock to the locking screw and tilt adjustment screw.

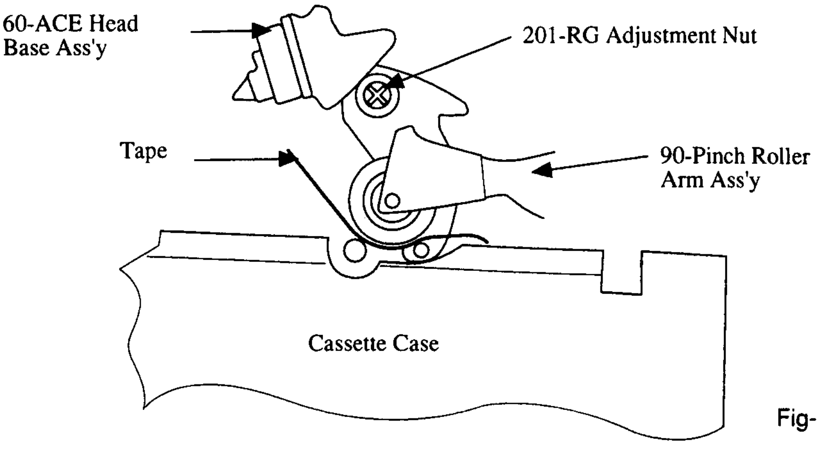


Fig-7

サービス技術ニュース	
番号	連絡内容
G－　　－	
G－　　－	
G－　　－	

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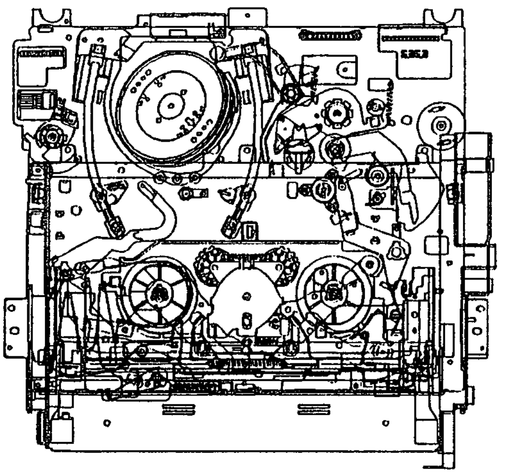
aiwa

aiwa SERVICE

TN-6500



VIDEO MECHANISM

•TYPE: English, Japanese

⊛This Service Manual has information about difference between TN-6500 111/211/212/213/218/219 and TN-6500 107/108/109/110/206/208. If requiring the other information, see Service Manual of TN-6500. (S/M Code No. 09-95B-115-90T).

⊛このサービスマニュアル TN-6500 111/211/212/213/218/219は、TN-6500 107/108/109/110/206/208との変更部分のみを載せます。共通部分については、S/M Code No. 09-95B-115-90Tを参照して下さい。

BASIC NAME	DERIVATION						
	NO.	NAME					
TN-6500	A	109	110	111			
	B	107	108				
	C	211 (206)	213 (209)	218			
	D	212 (208)	219				

⊛For different versions of mechanism that may be introduced since the issue of this manual, only the new or modified points will be discussed.

⊛本サービスマニュアル発行後の派生メカニズムは 新規作成、相違点のみ発行します。

SERVICE MANUAL

S/M Code No. 09-967-146-70T

VCR TEST TAPE INTERCHANGEABILITY TABLE

新しいタイプのテストテープは、CH-1 (NTSC用) と CH-2 (PAL用) の2種類があります。それぞれのテープには、(1) ~ (4) で区別する4種類の信号が、次の順番と時間で記録されています。
There are two types of the new allgnment tape CH-1B (for NTSC) and CH-2 (for PAL). On each tape four signals (1) - (4) are recorded for the times and in the order shown below.

(1) : 8min. → (2) : 2min. → (3) : 5min. → (4) : 5min.

TTV-MP1 (M-PAL用), TTV-MS1 (MESECAM用), TTV-S1 (SECAM用) については現行通りです。
The TTV-MP1 (for M-PAL), TTV-MS1 (for MESECAM) and TTV-S1 (for SECAM) allgnment tapes have the same contents as the previous tapes.

方式 Method	現行タイプ Now in use TYPE		新タイプ New Type		主な用途 Application
	テープ名 Model	記録内容 ※1 Contents ※1	テープ名 Model	記録内容 ※1 Contents ※1	
NTSC	TTV-N1	NTSC,Color, 1kHz,SP	CH-1B(2)	NTSC,Stairsteps, 1kHz,SP	PB-Yﾚﾍﾞﾙ調整等の一般電気調整。ACEﾍｯﾄﾞの高さ/傾き調整。 PB-Y Level/General electrical ADJ.Head ACE Height/Tilt ADJ.
	TTV-N1E	NTSC,Color, 1kHz,EP	CH-1B(4) ※2	NTSC,Color,1kHz, EP	ｽｲｯﾁﾝｸﾞ位置調整。 Switching position ADJ.
	TTV-N2	NTSC,Stairsteps, 7kHz,SP	CH-1B(1)	NTSC,Stairsteps, 7kHz,SP	ACEﾍｯﾄﾞのｱｼﾞﾏｽ調整。ｽｰﾊﾟｰｸﾘｱｰﾋﾟｸﾁｬｰのﾚﾍﾞﾙ調整。 Head ACE Azimuth ADJ.
	TTV-N12 (SCV-1998)	NTSC,Color, 1kHz,SP	CH-1B(4)	NTSC,Color,1kHz, EP	FMｴﾝﾍﾞﾛｰﾌﾟ調整。Xﾊﾞﾘｭｰ(位相)調整。 FM Envelope ADJ. X-Value ADJ.
	TTV-N7A	NTSC,Stairsteps, 1kHz,SP,HiFi400Hz	CH-1B(3)	NTSC,Color,No sound SP,HiFi400Hz	HiFiｵｰﾃﾞｨｵ再生ﾚﾍﾞﾙ調整。 HiFi Audio PB Level ADJ.
PAL	TTV-P1	PAL,Color, 1kHz,SP	CH-2(2) ※3	PAL,Stairsteps, 1kHz,SP	ｽｲｯﾁﾝｸﾞ位置調整。(SP専用ﾓﾃﾞﾙ)PB-Yﾚﾍﾞﾙ調整等の一般電気調整。ACEﾍｯﾄﾞの高さ/傾き調整。 Switching position ADJ. PB-Y Level/General electrical ADJ. Head ACE Height/Tilt ADJ.
	TTV-P1L	PAL,Color, 1kHz,LP	CH-2(4)	PAL,Color,1kHz, LP	ｽｲｯﾁﾝｸﾞ位置調整。(LP対応ﾓﾃﾞﾙ)FMｴﾝﾍﾞﾛｰﾌﾟ調整。(LP対応ﾓﾃﾞﾙ)　Xﾊﾞﾘｭｰ(位相)調整。(LP対応ﾓﾃﾞﾙ) Switching position.(LP Model)FM Envelope ADJ. (LP Model)X-Value ADJ.(LP Model)
	TTV-P2	PAL,Stairsteps, 6kHz,SP	CH-2(1)	PAL,Stairsteps, 6kHz,SP	ACEﾍｯﾄﾞのｱｼﾞﾏｽ調整。FMｴﾝﾍﾞﾛｰﾌﾟ調整。(SP専用ﾓﾃﾞﾙ) Xﾊﾞﾘｭｰ(位相)調整。(SP専用ﾓﾃﾞﾙ) Head ACE Azimuth ADJ. FM Envelope ADJ.(SP Model) X-Value ADJ.(SP Model)
	TTV-P7	PAL,Stairsteps, 1kHz,SP,HiFi 1kHz	CH-2(3)	PAL,Color,No sound SP,HiFi400Hz	HiFiｵｰﾃﾞｨｵ再生ﾚﾍﾞﾙ調整。 HiFi Audio PB Level ADJ.
	TTV-P16	PAL,Color, 400Hz,SP,HiFi 1kHz	変更なし No Changed.		FMﾌｨﾙﾀｰ調整 FM Filter ADJ.

※ 1. ｶﾗｰ方式→映像信号→ﾉｰﾏﾙ音声→ﾃｰﾌﾟｽﾋﾟｰﾄﾞ→HiFi 音声 の順で記載されています。
※ 1. Described in the order of color format. video signal. linear audio. tape speed and Hi-Fi audio.
※ 2. SP専用ﾓﾃﾞﾙの場合は、CH-1B の (1) ~ (3) を使用して下さい。
※ 2.Use CH-1B (1) - (3) with models used exclusively in the SP mode.
※ 3. 色信号の観測が必要な場合は CH-2の (3) または (4) を使用して下さい。
※ 3.Use CH-2 (3) and (4) when it is necessary to observe the chroma signal.

STANDARD MAINTENANCE

1. SERVICE SCHEDULE

○：チェック　●：交換

デッキ			定期サービス表			
BLOCK NAME	Ref. No.	部品名	1000h	2000h	3000h	4000h
	110	TENSION ARM ASS' Y		●		●
	80, 81	T.S REEL ASS' Y			●	
	120	SUB PLATE ASS' Y		●		●
	142	LOADING MOTOR ASS' Y			●	
	100	CAPSTAN MOTOR		●		●
	90	PINCH ROLLER ARM ASS' Y		●		●
	123	RF CLUTCH ASS' Y		●		●
	61	ACE HEAD HVMZA1220			●	
	66	FE HEAD BASE ASS' Y			●	
	5	DRUM EARTH ASS' Y			●	
	1	CYLINDAR ASS' Y	○	●	○	●

注意：

- テープ走行系のすべての部品を清掃し、清掃後はデッキ調整すべてを行なうこと。
  ビデオヘッド/ピンチローラ/ACEヘッド/フルイレーズヘッド

2. CLEANING

1.　ビデオヘッドの清掃（Fig-1 参照）

1) スチールキャビネットをはずす。
2) 素手でアッパードラムやロワードラムに触れぬ様手袋（薄いもの）をする。
3) ヘッドクリーニング用クロス又はセーム（鹿）皮にアルコールを2、3滴つけ、ヘッドチップに軽くあててアッパードラムを反時計方向に回す。

注意

- ビデオヘッドは非常に硬い物質でできていますが、非常に薄いため、縦方向に清掃するのは避けて下さい。
- 清掃した箇所が乾くまでセットを作動しないで下さい。
- 汚れたヘッドクリーニング用クロス又はセーム（鹿）皮は再使用しないで下さい。

2.　ACヘッドのクリーニング（Fig-2 参照）

1) スチールキャビネットを外す。
2) ヘッドクリーニング用クロス又はセーム（鹿）皮にアルコールを2、3滴つけて、アッパードラムや他の走行系部品を痛めない様注意しながら、クリーニングする。

注意

- ACヘッドを縦方向にクリーニングしないで下さい。
- クリーニングした箇所が乾くまでセットを作動しないで下さい。

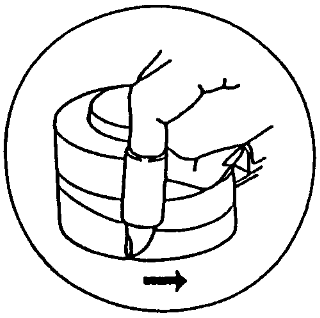


Fig-1

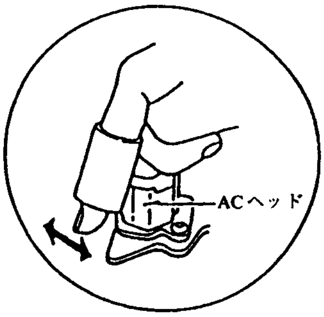


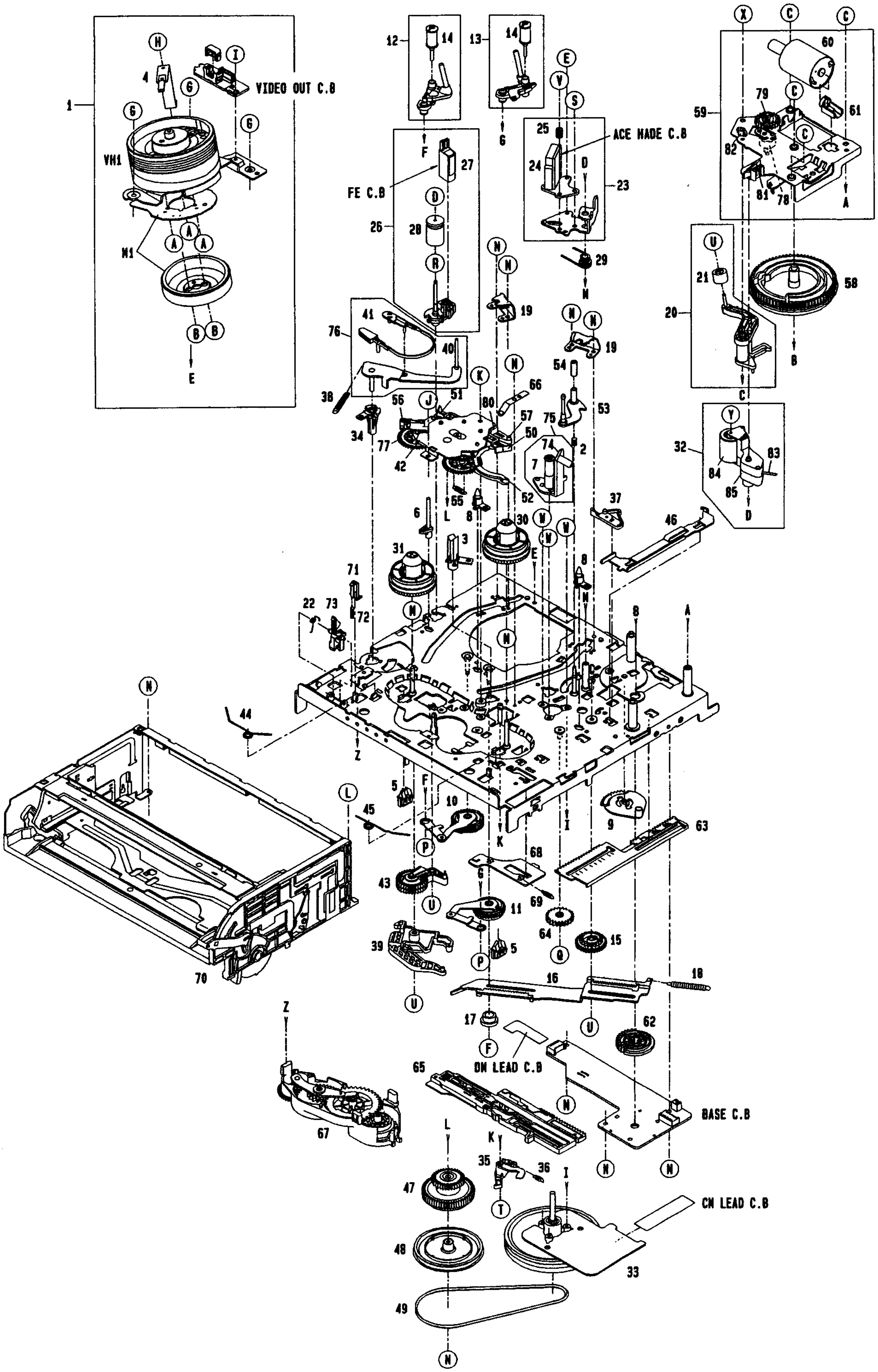
Fig-2

DISASSEMBLY PARTS LIST

DESCRIPTIONで判断できない物は “REFERENCE NAME LIST” を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	S8-067-017-060	--	CYLINDAR ASS'Y<208>
1	S8-066-016-030	--	CYLINDAR ASS'Y<109>
1	S8-066-016-010	--	CYLINDAR ASS'Y<107,108>
1	S8-066-016-080	--	CYLINDAR ASS'Y<110>
1	S8-065-017-010	--	CYLINDAR ASS'Y<206,219>
1	S8-065-016-090	--	CYLINDAR ASS'Y<111>
1	S8-065-017-070	--	CYLINDAR ASS'Y<213,211>
1	S8-065-017-080	--	CYLINDAR ASS'Y<212>
1	S8-065-017-110	--	CYLINDAR ASS'Y<218>
2	S8-065-170-050	--	RG ARM SPRING<EXCEPT 107,108,109 206>
3	S8-065-130-010	--	OPTICAL LEADER
4	S8-065-015-010	--	DRUM EARTH ASS'Y
5	S8-065-133-030	--	RS LEADER
6	S8-065-023-010	--	F POST METAL ASS'Y
7	S8-065-023-020	--	TAPE GUIDE ASS'Y<107,108,109,110 206,208>
7	S8-065-023-040	--	TAPE GUIDE ASS'Y<213,111,211,219 212,218>
8	S8-063-020-230	0E	CASSETE GUIDE BOSS
9	S8-065-035-020	--	LOADING LEVER KASIME
10	S8-063-033-050	2A	LOADING PLATE L ASS'Y
11	S8-065-033-050	--	LOADING PLATE R ASS'Y
12	S8-065-033-030	--	L BLOCK L ASS'Y
13	S8-065-033-040	--	L BLOCK R ASS'Y
14	S8-063-030-090	2A	ROLLER POST
15	S8-065-030-040	--	LOADING GEAR
16	S8-065-030-050	--	L GEAR PLATE
17	S8-065-030-110	--	L GEAR PLATE COLLOR
18	S8-065-030-100	--	L GEAR PLATE SPRING
19	S8-065-030-010	--	LD CATCHER
20	S8-065-033-060	--	HEAD CLEANING ASS'Y
21	S8-063-030-290	--	CLEANING ROLLER ASS'Y
22	S8-065-130-050	--	REC LEVER SPRING<EXCEPT 107,206 211>
23	S8-065-043-030	--	AC HEAD BASE ASS'Y<107,206,211>
23	S8-065-043-020	--	ACE HEAD BASE ASS'Y<EXCEPT 107 206,211>
24	S6-204-030-240	--	AC HEAD HVMZB1030<107,206,211>
24	S6-204-150-200	--	ACE HEAD HVMZA1220<EXCEPT 107 206,211>
25	S8-000-060-040	0E	AZIMUTH SPRING
26	S8-065-043-010	--	FE HEAD BASE ASS'Y
27	S6-209-150-040	--	VTR1X2ERS11107<EXCEPT 107,206 211>
28	S8-063-043-060	--	IMPEDANCE ROLLER ASS'Y
29	S8-065-040-020	--	HEAD BASE SPRING
30	S8-065-053-010	--	T REEL ASS'Y
31	S8-065-053-020	--	S REEL ASS'Y
32	S8-065-063-010	--	PINCH ROLLER ARM ASS'Y
33	S6-003-030-600	--	CAPSTAN MOTOR F2QTB10 (M2)
34	S8-063-080-040	1A	BT ARM METAL
35	S8-065-073-010	--	C BRAKE ASS'Y
36	S8-065-070-020	--	C BRAKE SPRING
37	S8-065-170-040	--	RG LEVER
38	S8-065-080-020	--	BT SPRING
39	S8-065-080-060	--	BT LEVER
40	S8-065-083-020	--	TENSION ARM SEMI ASS'Y
41	S8-065-083-030	--	BT BAND ASS'Y
42	S8-065-093-030	--	SUB PLATE ASS'Y
43	S8-065-093-040	--	RF CLUTCH ASS'Y
44	S8-065-100-070	--	TS BRAKE SPRING
45	S8-065-100-090	--	SS BRAKE SPRING
46	S8-065-100-100	--	TS BRAKE LEVER
47	S8-065-093-020	--	CLUTCH ASS'Y
48	S8-065-093-010	--	CLUTCH PULLY ASS'Y
49	S8-065-090-200	--	DRIVE BELT
50	S8-065-103-010	--	T MAIN BRAKE ASS'Y
51	S8-065-103-020	--	S MAIN BRAKE ASS'Y
52	S8-065-103-030	--	T SOFT BRAKE ASS'Y
53	S8-065-175-010	--	RG ARM KASIME
54	S8-065-170-030	--	RG ADJUST NUT
55	S8-065-100-050	--	MAIN BRAKE SPRING
56	S8-065-100-080	--	S SOFT BRAKE ARM
57	S8-065-110-140	--	REVERSE LEVER PIN
58	S8-065-113-020	--	CAM GEAR ASS'Y
59	S8-065-113-010	--	CAM PLATE ASS'Y
60	S8-065-113-030	--	LOADING MOTOR ASS'Y(M3)
61	S8-065-110-110	--	MOTOR HOLDER
62	S8-065-110-040	--	M GEAR
63	S8-065-113-050	--	M GEAR PLATE ASS'Y
64	S8-065-110-070	--	M RELAY GEAR
65	S8-065-110-080	--	M SLIDE PLATE
66	S8-065-110-170	--	R LEVER SPRING PLATE
67	S8-065-153-010	--	FD GEAR CASE ASS'Y
68	S8-065-150-090	--	FD SLIDE PLATE
69	S8-065-150-100	--	FD SLIDE PLATE SP
70	S8-065-163-010	--	FRONT LOADING ASS'Y
71	S8-065-130-060	--	IN SWITCH SLIDER
72	S8-065-130-070	--	IN SW SLIDER SPRING
73	S8-065-130-040	--	REC SWITCH LEVER<EXCEPT 107,206 211>
74	S8-065-020-210	--	TAPE PROTECT<213,111,211,219,212 218>
75	S8-065-023-030	--	TAPE GUIDE BASE ASS'Y<213,111,211 219,212,218>
76	S8-065-083-010	--	TENSION ARM ASS'Y
77	S8-065-093-070	--	GEAR PLATE ASS'Y
78	S8-065-110-030	--	CAM DRIVE GEAR
79	S8-065-110-100	--	WORM WHEEL
80	S8-065-110-130	--	REVERS LEVER
81	S8-065-110-150	--	OPEN ANGLE
82	S8-065-110-160	--	AH ADJUST NUT
83	S8-065-060-040	--	PINCH ROLLER SPRING<213,111,211 219,212,218>
84	S8-065-060-050	--	PINCH ROLLER<213,111,211,219,212 218>
85	S8-065-065-010	--	PINCH ROLLER KASIME<213,111,211 219,212,218>
A	S9 P02-261-510	--	TAMS SCREW 2.6X15
B	S8 065-013-150	--	ROTOR SCREW B ASS'Y
C	S9-P02-260-510	0E	TAMS SCREW 2.6X5
D	S9-W02-300-500	0E	POLTSIDER WASHER1.6X3.8X0.3
E	S9-P09-300-610	0E	SCREW (SHARP-POINTED) 3X6
F	S9-W02-300-600	0E	POLYSLIDER WASHER2.1X5X0.5
G	S9-P04-300-510	0E	TAPPING SCREW 3.0X5
H	S9-P04-260-410	0E	TAPPING SCREW 2.6X4
I	S9-P12-260-640	0E	TAMS SCREW (TAPPING) S 2.6X6
J	S9-C04-265-030	0E	CAMERA SCREW(TAPPING)S 2.6X5
K	S9 P04-200-410	--	TAPPING SCREW 2.0X4
L	S9-B03-260-510	0E	TAPPING SCREW(BIND) 2.6X5
M	S9-W03-301-100	0E	NYLON WASHER 2.5X5X0.3
N	S9-P04-260-510	0E	TAPPING SCREW 2.6X5
P	S9-W06-501-100	0E	HL WASHER(CUT)4.5X7X0.5
Q	S9-W06-301-000	--	HLW(C) 2.6X6X0.3
R	S9-W06-300-400	0E	HL WASHER(CUT) 1.55X4.5X0.3
S	S9-P01-260-720	0E	SCREW 2.6X7
T	S9-W02-501-000	0E	POLYSLIDER WASHER2.1X5X0.5
U	S9-W02-501-100	0E	POLYSLIDER WASHER2.6X6X0.5
V	S8-000-060-260	0E	AZIMATH SPRING SCREW
W	S9-P07-260-610	--	TAPPING SCREW P 2.6 X 6
X	S9-F22-260-810	--	ADJUST SCREW 2.6X8
Y	S9-B01-260-410	--	SCREW,BIND 2.6-4<213,111,211,219 212,218>

EXPLODED VIEW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DN LEAD C.B
BASE C.B
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48
49
35
36
33
CN LEAD C.B

HOW TO ASSEMBLE THE PARTS

1. L GEAR PLATE

L GEAR PLATE (16) の取付けの際は以下 1) ～ 4) に注意すること。

1) L BLOCK R ASSY (13) と L BLOCK L ASSY (12) がアンスレッディング状態であること。
2) LOADING GEAR (15) と L GEAR PLATE (16) のマークを合わせる。
3) LOADING PLATE R ASSY (11) と L GEAR PLATE (16) のマークを合わせる。
4) LOADING LEVER KASIME (9) が矢印方向に止まるまで回転していること。

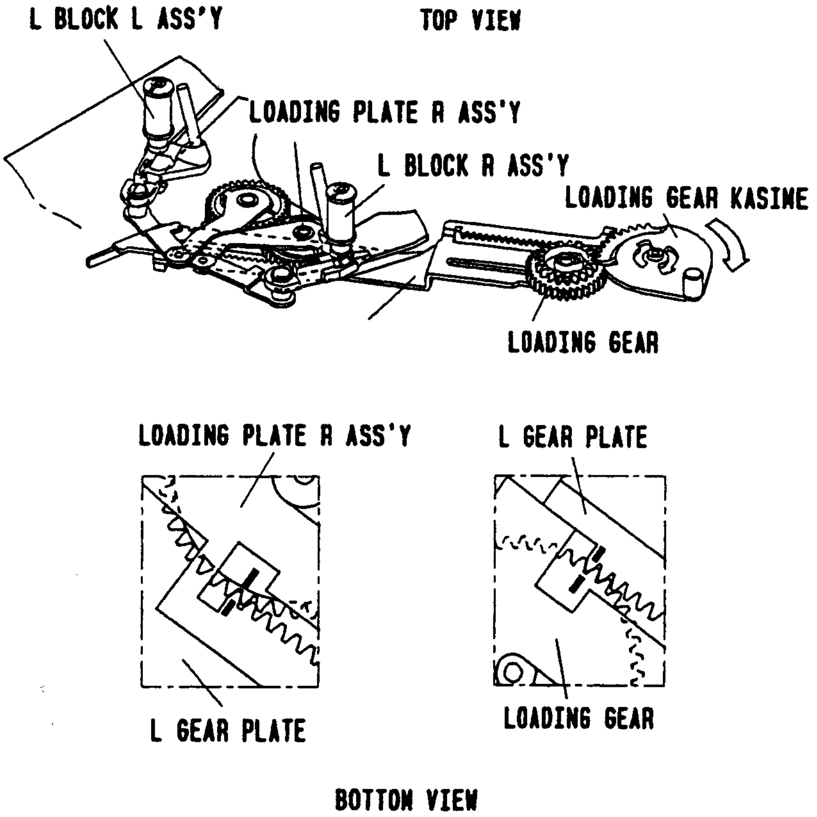

L BLOCK L ASS'Y
TOP VIEW
LOADING PLATE R ASS'Y
L BLOCK R ASS'Y
LOADING GEAR KASIME
LOADING GEAR
LOADING PLATE R ASS'Y
L GEAR PLATE
L GEAR PLATE
LOADING GEAR
BOTTOM VIEW

Fig-1

2. ACE HEAD BASE ASSY

1) ビス Ⓥ を完全に締めつけ、※部が平行になるようにビス Ⓢ を締めながら調整する。

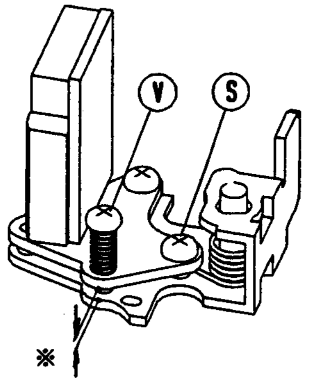


Fig-2

3. RF CLUTCH ASSY

1) M SLIDE PLATE (65) の構に RF CLUTCH ASSY (43) のシャフトを入れる。

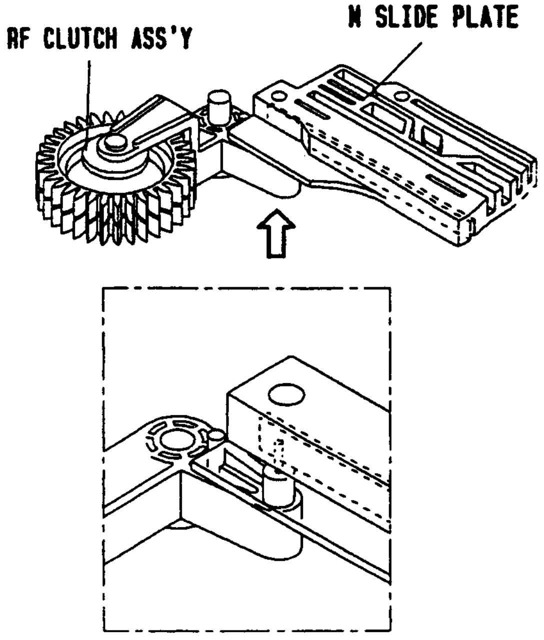
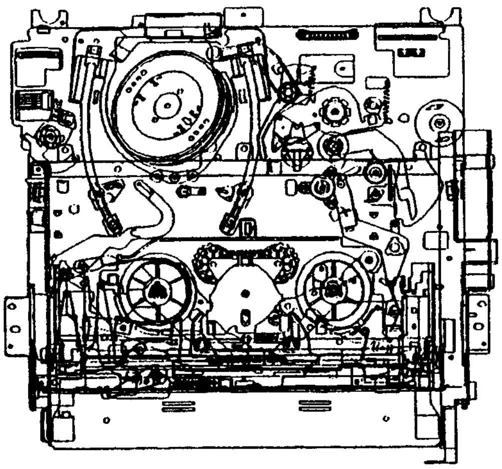

RF CLUTCH ASS'Y
M SLIDE PLATE

Fig-3

aiwa

aiwa
SERVICE

TN-6500



VIDEO MECHANISM

• TYPE: English

SUPPLEMENT

BASIC NAME	DERIVATION				
	NO.	NAME			
TN-6500	A				
	B	232			
	C				
	D				

This Service Manual has information about difference between TN-6500 232 and tn-6500 117. If reguiring the other information,see Service Manual of TN-6500.(S/M Code No.09-977-210-30T)

S/M Code No. 09-987-279-5OT

SERVICE MANUAL

MECHANICAL PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S8-065-017-200		CYLINDAR ASSY				
27	S6-204-150-180		FE HEAD HVFHG0003				
33	S6-003-030-690		CAPSTAN MOTOR(F3QTB14)				
86	S8-065-013-010		V OUT PWB ASSY				
91(M1)	S8-065-013-160		DRUM MOTOR ASSY(M1)				

サービス技術ニュース	
番号	連絡内容
G— —	
G— —	
G— —	

アイワ株式会社
AIWA CO.,LTD.

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Tokyo Japan

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